PB89-204846

Superfund Record of Decision (EPA Region 9)
South Bay Asbestos Area, California
(First Remedial Action), September 1988

(U.S.) Environmental Protection Agency, Washington, DC

29 Sep 88

U.S. Department of Commerce
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First Remedial Action - Final

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16. Abstract (Limit: 200 words)

The South Bay Asbestos (SBA) site is located at the northern end of the Santa Clara Valley and at the southernmost extent of San Francisco Bay, in Alviso, California. The site is within an area of approximately 330 acres, and is comprised of a mixture of residential, commercial, light industrial, and agricultural land uses. Approximately 1,700 residents live in Alviso. The site is comprised of a ring levee, which extends around the community of Alviso on the east, north and northwest. It is approximately four to twelve feet in height, two miles in length, has a trapezoidal shape, and covers an area of about eight acres. A narrow path exists along the crest of the levee. The levee was built by the City of San Jose in 1983 during a major flood caused by the Coyote Creek and the Guadalupe River. It lies within the 100-year flood plain of the Guadalupe River and was constructed on portions of wetland areas adjacent to the community of Alviso. It also abuts wetland areas next to a national wildlife refuge near Alviso. In August 1983, an excavation occurred on property owned by the City of San Jose involving the construction of an outfall structure at the Guadalupe River levee. The excavation revealed asbestos contamination ranging from 20 to 40 percent by area. Contaminated soil was removed between August and December 1983. A September 1983 soil sampling also revealed the presence of asbestos contamination throughout the
(See Attached Sheet)

→ p2

17. Document Analysis a. Descriptors
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South Bay Asbestos, CA
First Remedial Action - Final
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Key Contaminants: asbestos

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Emergency and
Remedial Response

EPA/ROD/R09-88/026
September 1988

PB89-204846

EPA

Superfund Record of Decision:

South Bay Asbestos Area, CA

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SPRINGFIELD, VA. 22161

16. ABSTRACT (continued)

community of Alviso, including the ring levee. As a result, EPA sprayed the ring levee with a polymer dust suppressant to control asbestos dust in May 1986, in 1987, and again in July 1988. The primary contaminant of concern affecting the soil is asbestos.

The selected remedial action for the ring levee includes: stripping and rough grading of the levee; placement of a compacted soil layer and a top soil cover followed by revegetation to prevent erosion; alteration of the side slopes and construction of a three-foot wide path on the crest of the levee; implementation of strict asbestos/dust control measures during the entire construction operation; and implementation of deed restrictions. The estimated present worth cost for this remedial action is $2,374,700 with annual O&M of $19,000.

RECORD OF DECISION

RING LEVEE OPERABLE UNIT

SOUTH BAY ASBESTOS AREA SUPERFUND SITE

ALVISO DISTRICT, SAN JOSE, CALIFORNIA

September 1988

TABLE OF CONTENTS

SECTION PAGE

DECLARATION 1

RECORD OF DECISION SUMMARY 5

- I. Site Name, Location, and Description 5
- II. Site History 7
- III. Enforcement Activities 9
- IV. Summary of Risks 9
- V. ARARs 10
- VI. Description of the Alternatives 14
- VII. Selected Remedy 22
- VIII. Statutory Determinations 23
- IX. Future Actions 23
- X. Schedule 23

Attachments

Administrative Record Index

Responsiveness Summary

RECORD OF DECISION

Site Name

Alviso Ring Levee
Operable Unit
South Bay Asbestos Area

Site Location

Community of Alviso
San Jose, California

Statement of Basis and Purpose

This document represents the selected remedial action for this Operable Unit of the South Bay Asbestos Area, in the community of Alviso, located in San Jose, California. This document was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Contingency Plan (40 CFR Part 300). This decision is based on the administrative record for this site. The attached index (Exhibit 1) identifies the items on which the selection of the remedial action is based.

Description of Selected Remedy

This Record of Decision addresses the asbestos contamination present in the Alviso Ring Levee located in the South Bay Asbestos Area. EPA is undertaking an additional Feasibility Study to evaluate remedial action alternatives for the entire South Bay Asbestos Area and will select a remedy for the entire site in a separate Record of Decision.

The ring levee is constructed of asbestos containing rock and soil. Analysis of soil samples collected from the ring levee using polarized light microscopy shows the asbestos levels in the soil to ranging from non-detect to 40%. Because of the limited precision and accuracy of the PLM analytical method, the soil concentrations reported are considered qualitative; notwithstanding these limitations, the data confirmed that in some areas of the levee asbestos concentrations were very high. Asbestos is a known human carcinogen and has been shown to cause lung cancer

and mesothelioma, a cancer of the lung lining. If the asbestos in the ring levee remains uncontrolled, a potential for human exposure to asbestos and a potential increased risk to human health will continue to exist.

EPA has selected a soil cover as the remedy for the ring levee contamination. EPA's preferred remedial action alternative had been a soil/gunite combination cover. Concerns raised by community members regarding the aesthetics, the possibility of personal injury to children riding their bikes and skateboards on the gunite, plus concerns raised by U.S. Fish and Wildlife regarding the gunite covered portion of the levee limiting wildlife shelter or habitat along the levee, made EPA re-evaluate its preferred alternative.

Because of these concerns, EPA has eliminated the gunite portions and selected a soil cover as the remedy. This remedial action alternative will control the release of asbestos emissions and will assure long term protection of human health and the environment. The present worth cost of the alternative is $2,374,700 based upon a 4% interest rate, with a 30-year discount period. This alternative entails:

- **stripping and rough grading the existing levee,**
- **placing a minimum of 12 inches of compacted soil over the levee**
- **placing 6 inches of topsoil over the compacted soil,**
- **planting native vegetation on the levee to control erosion,**
- **implementing all necessary environmental mitigation required under Section 404 of the Clean Water Act for impacts of the soil cover on wetlands and endangered species habitat,**
- **deed restrictions, to prevent the disturbances of the soil cover and possible release of asbestos fibers, shall be placed on property on which the ring levee and soil cover exists.**

The cost for environmental mitigation was not included in the $2,374,700 cost estimate for the alternative, since its nature, scope, and cost remain to be determined; however, mitigation was a factor in all of the alternatives considered, and does not affect the relative cost comparisons. The potentially responsible parties (PRPs) will be responsible for all costs including any cost associated with wetland mitigation.

Design for this operable unit will entail the selected remedy described above plus strict dust control measures to limit the release of asbestos fibers from the ring levee during the Remedial Action.

Operation and maintenance activities will be required to ensure the effectiveness of the response action. These activities include periodic maintenance of the vegetation until it becomes self-maintaining (this is anticipated to take one year), and semi-annual visual inspections to ensure the integrity of the soil cover and any necessary repair work of the soil cover. In the event of a natural disaster (flood or earthquake) necessary repairs will be made to ensure that the asbestos is contained. These costs will again be the responsibility of the potentially responsible parties.

The potentially responsible parties have indicated an interest in pursuing the complete removal of the levee, an option that EPA did not select due to its high cost, the proportionally greater potential for asbestos releases during removal operation, the institutional, regulatory, and technical problems associated with replacing the levee's flood protection function, and the difficulties associated with disposing of the removed material. Complete removal of the levee, assuming it can be accomplished in a safe manner, would be at least as protective as the selected soil cover remedy and would be a permanent solution. Should the PRPs formally propose to implement removal despite its higher cost and identify acceptable solutions to the problems associated with it, EPA may amend this ROD to select the removal option. Input from other government agencies and the community would be sought before implementing a removal remedy.

Declaration

Consistent with CERCLA as amended by SARA, and the National Contingency Plan, I have determined that the selected remedy for the Alviso Ring Levee, Operable Unit of the South Bay Asbestos Area, meets the remedy selection standards in CERCLA Section 121, 42 U.S.C. Section 9621, by being protective of human health. I also have determined that the selected remedy meets the applicable or relevant and appropriate environmental statutes and regulations, and that it is cost effective. The selected remedy utilizes permanent solutions to the maximum extent practicable for this site. Alternative treatment technology of the asbestos contamination in the Alviso Ring Levee was determined to be impracticable based upon effectiveness, technical feasibility, implementability and cost factors.

Because this remedy will result in hazardous substances remaining on site, a review, pursuant to CERCLA Section 121, 42 U.S.C. Section 9621, will be conducted five years after commencement of remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment.

Daniel W. McGovern

9.29.88

Daniel W. McGovern **Date**
Regional Administrator
EPA Region IX

RECORD OF DECISION
SUMMARY

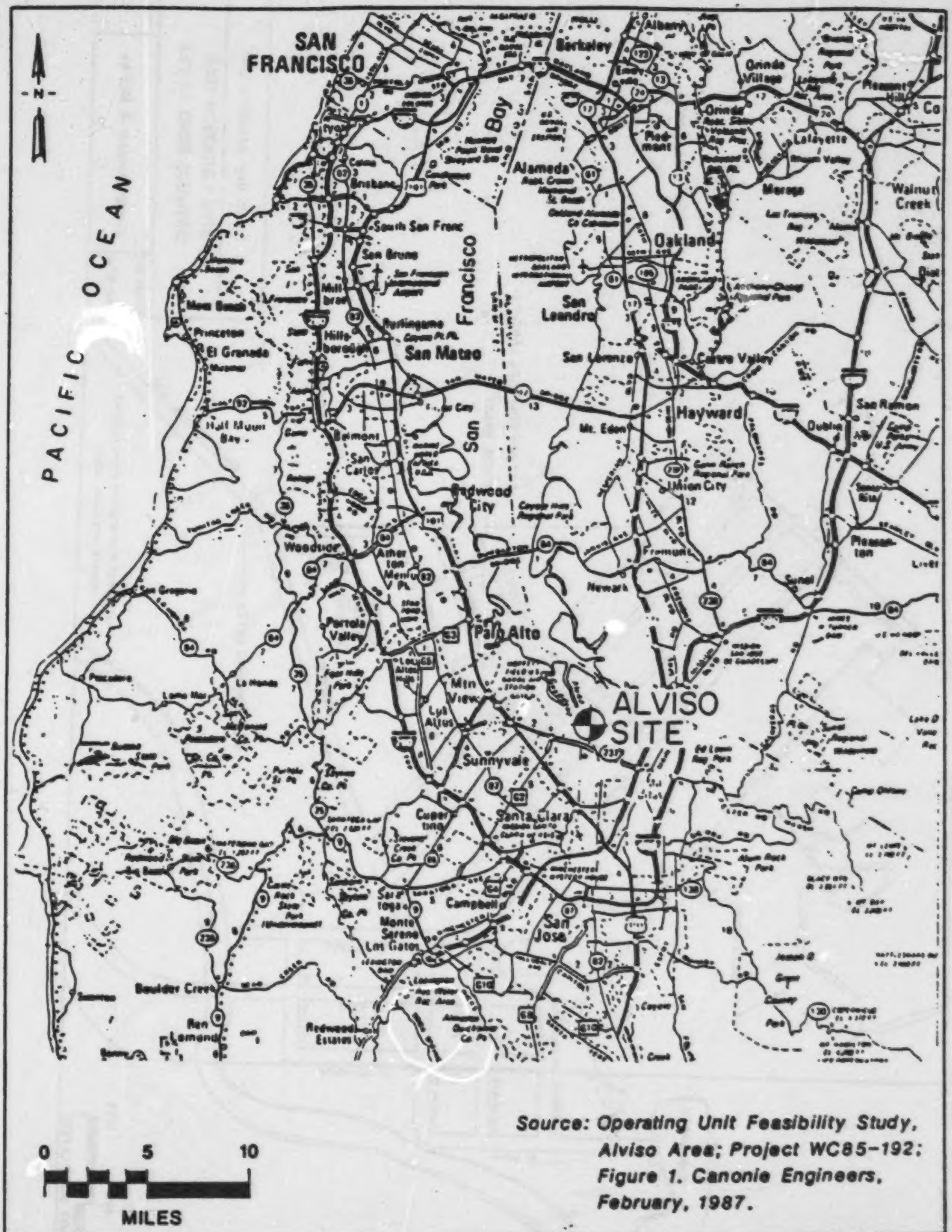
I. Site Name, Location, and Description

The South Bay Asbestos site is located at the northern end of the Santa Clara Valley and at the southernmost extent of San Francisco Bay (Figure 1). The site, which includes the community of Alviso, is a mix of residential, commercial, light industrial and agricultural land uses, comprising an area of about 330 acres (Figure 2). Alviso is the northernmost neighborhood or section of the City of San Jose. The older section of Alviso, located west of Gold Street and north of the Guadalupe River, is a designated National Register Historic District. Approximately 1,700 residents live in Alviso. The town is located in a quiet section of the Silicon Valley between Highway 237 to the south, rapidly-growing Santa Clara to the west and south, and expanding "hi-tech" office development to the east and northeast.

A major aspect of the site is its susceptibility to flooding. Flooding occurs because of the site's proximity to the Bay and land subsidence due to ground water extraction in the vicinity. Flood-producing storms occur within the study area every few years, as evidenced by historical records and newspaper accounts. Two major streams enter the Bay in the vicinity of the site, including the Guadalupe River west and south of Alviso and Coyote Creek to the northeast. These rivers do not provide natural local drainage since they are surrounded by levees on both sides to prevent overbank flooding. The Guadalupe River was channelized in 1963 by the Santa Clara Valley Water District (SCVWD) to provide for greater flood flow capacity. The streams are under tidal action and, therefore, discharge to the Bay is impeded during high tides. Numerous salt evaporation ponds are present between Alviso and the Bay, further impeding natural drainage into the Bay.

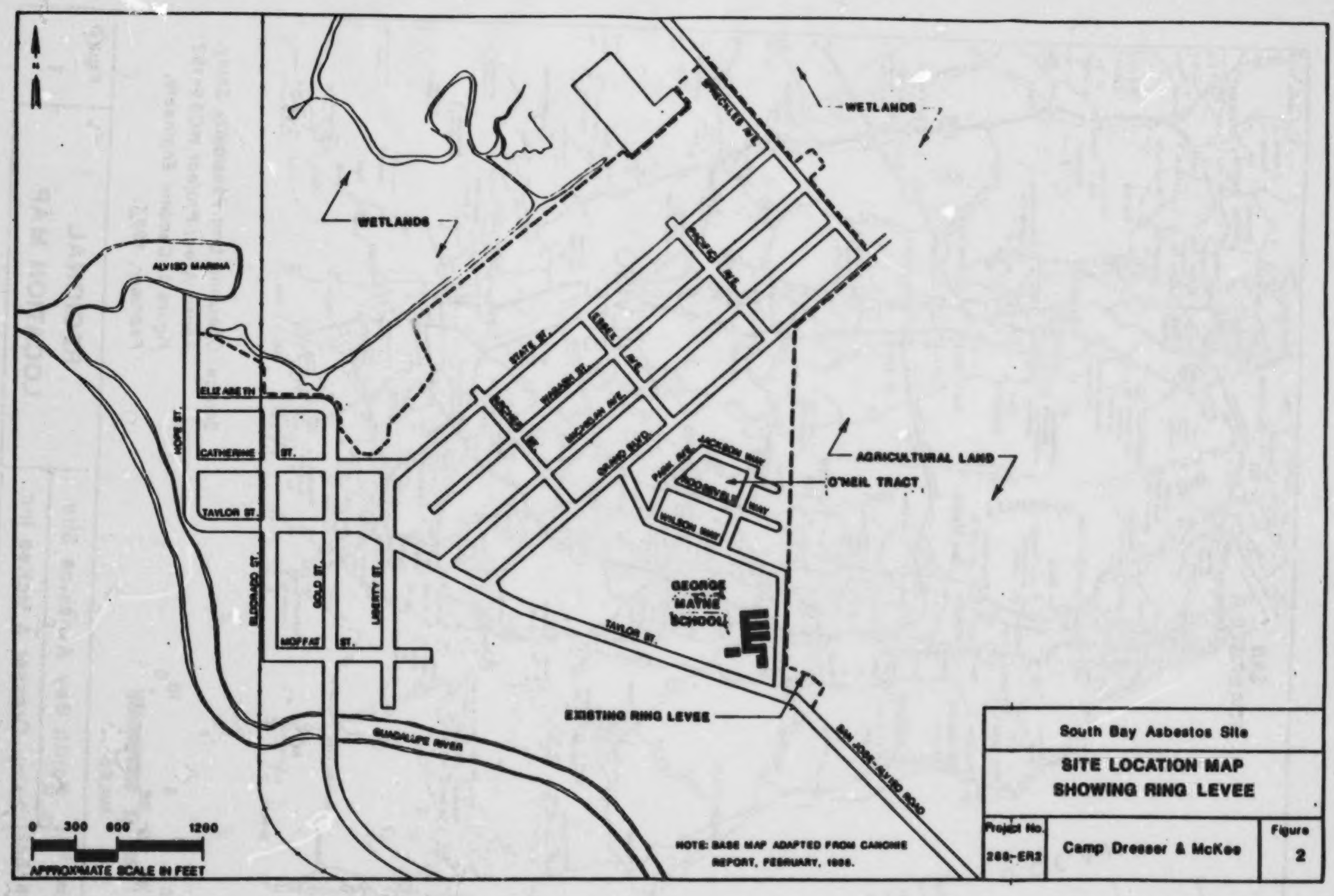
The development of agriculture in the region was facilitated by widespread ground water withdrawal from irrigation wells. Between 1934 and 1967, the ground surface of the Santa Clara Valley generally subsided four to six feet and in some locations to an elevation below sea level due to aquifer compaction, significantly increasing the potential for flooding. The land surface of most of Alviso has been artificially raised with soil and debris fill to offset the effects of subsidence.

The community of Alviso is adjacent to wetlands. Over the last century, most of the tidal flats and marshlands which surround San Francisco Bay have been filled or altered. Near Alviso, a fragment of the marshland survives as the New Chicago Marsh, a National Wildlife Refuge about 300 acres in size. The


N
SAN FRANCISCO
PACIFIC OCEAN
San Francisco Bay
Berkeley
Albany
Orinda
Lafayette
Walnut Creek
Alameda
Oakland
Brisbane
South San Franc
San Bruno
Millbrae
Burlingame
Hillsborough
San Mateo
San Leandro
San Lorenzo
Castro Valley
Hayward
Moss Beach
Princeton
El Granada
Half Moon Bay
Belmont
San Carlos
Redwood City
Mt. Eden
Union City
Dublin
San Ramon
Pleasanton
Fremont
Newark
Sunol
Woodside
Atherton
Menlo Pk.
Portola Valley
Palo Alto
Los Altos
Mtn View
San Gregorio
Pescadero
La Honda
ALVISO SITE
Sunnyvale
Cupertino
Santa Clara
Saratoga
Campbell
Monte Sereno
Los Gatos
San Jose
Boulder Creek
Ben Lomond
Redwood Estates
0
5
10
MILES

Source: Operating Unit Feasibility Study, Alviso Area; Project WC85-192; Figure 1. Canonie Engineers, February, 1987.

Project No.	South Bay Asbestos Site	REGIONAL LOCATION MAP	Figure
288-ER2	Camp Dresser & McKee Inc.		1


WETLANDS
WETLANDS
ALVISO MARINA
SPRECKLES AVE.
PACIFIC AVE.
ESSEX AVE.
STATE ST.
WABASH ST.
MICHIGAN AVE.
ARCHER ST.
GRAND BLVD.
PARK AVE.
JACKSON WAY
ROOSEVELT WAY
WILSON WAY
AGRICULTURAL LAND
O'NEIL TRACT
GEORGE MAYNE SCHOOL
TAYLOR ST.
ELIZABETH
HOPE ST.
CATHERINE ST.
TAYLOR ST.
ELDORADO ST.
GOLD ST.
LIBERTY ST.
MOFFAT ST.
EXISTING RING LEVEE
GUADALUPE RIVER
SAN JOSE-ALVISO ROAD
0 300 600 1200
APPROXIMATE SCALE IN FEET

NOTE: BASE MAP ADAPTED FROM CANONIE REPORT, FEBRUARY, 1986.

South Bay Asbestos Site

SITE LOCATION MAP
SHOWING RING LEVEE

Project No.		Figure
260-ER2	Camp Dresser & McKee	2

Refuge has an active public education program through its Environmental Education Center, located about a mile northeast of the town and administered by the U.S. Fish and Wildlife Service (USFWS). The ring levee, although not located in the Refuge proper, was constructed on portions of the wetland areas and abuts wetland areas which are adjacent to the Refuge and hydraulically connected to it.

The wetlands adjacent to Alviso are a significant wildlife habitat because they provide an interface between fresh and saltwater environments. The wetlands support several endangered or threatened species, including the Salt Marsh Harvest Mouse (Reithrodontomys raviventris), Golden Eagle (Aquila Chrysaetos), and Peregrine Falcon (Falco Peregrinus). The burrowing owl is a "protected species of special concern." Small mammals and a great number of birds and waterfowl species use the wetlands and surrounding "upland habitats", i.e., land elevated a few feet above the marsh.

Description of the Levee

The ring levee, which extends around the community of Alviso on the east, north, and northwest (Figure 2), is approximately four to twelve feet in height, two miles in length, and has a trapezoidal shape. The levee has side slopes generally steeper than 2:1, and covers an area of approximately eight acres. A narrow, approximately two-foot wide path exists along the crest.

The ring levee immediately adjoins School Street, the homes on the eastern side of Alviso (the O'Neil Tract), and continues along Grand Blvd. and Spreckles Ave. The levee is removed from public streets along the northwest, where it borders the commercial trucking operations along State Street. The steep outboard or bayward side of the levee abuts wetlands areas along Spreckles Avenue and along the commercial truckyard operations. At its western end, the levee borders two private homes. One home owner has fenced the levee to prevent foot traffic. The levee terminates at the boat launching marina at the northwestern end of town.

The levee immediately adjacent to streets and homes is used heavily as a pedestrian walkway. Residents, and particularly children, have been seen walking and jogging along the berm, playing on the slopes, picnicking or riding bicycles on or adjacent to the levee. The levee in these areas is barren of vegetation. In addition, it appears that motor vehicles may also drive over the levee. Areas removed from public access tend to be well-vegetated with grasses and weeds.

II. Site History

The City of San Jose constructed the ring levee during a flood in March 1983, which caused the evacuation of the entire town for sixteen days as flood waters overtopped the Coyote Creek channels and existing levees. The ring levee was constructed in an attempt to divert existing and possible future flood waters from the community. Because of the urgency of the situation, San Jose did not obtain the necessary permits from the Army Corps of Engineers (COE) who has jurisdiction over such construction, and without consultation with other federal and state agencies. San Jose plans to obtain an "after the fact" permit from COE; however, it has not as of this date. EPA's remedial action for the ring levee is not connected in any way with San Jose's or any other agencies' plans to provide flood control protection for the community.

History of Site Investigations and Response Actions

In August of 1983, the Santa Clara Valley Water District (SCVWD) initiated construction of an outfall structure at the Guadalupe River levee. Excavation occurred on property owned by the City of San Jose and SCVWD. The activity was observed by a California Occupational Safety and Health Administration (CAL-OSHA) inspector. The inspector collected samples of the excavated material because he suspected the material to be asbestos waste debris. The samples were analyzed by the Department of Health Services (DHS) Air and Industrial Hygiene Laboratory and they confirmed the inspector's suspicions. The samples contained concentrations of asbestos ranging from 20 to 40% by area. Since CAl-OSHA's jurisdiction only extends to protection of employees, they referred the situation to DHS. After confirming the presence of asbestos in the Guadalupe River levee, DHS ordered SCVWD to remove all the asbestos contaminated soil. Removal of the contaminated soil took place between August and December 1983.

In September 1983, DHS collected soil samples from 20 random locations within the community of Alviso. The sample results indicated that asbestos was randomly distributed throughout the community of Alviso, including the Alviso Ring Levee. Based on the soil results, DHS initiated California Hazardous Waste Site Ranking procedures to include the community on the State Superfund list. The Community was listed 10th on the State Superfund list in December of 1983.

In June of 1984, EPA proposed the site for inclusion on the National Priority List. The site was approved for the NPL in October 1984, with a score of 44.68.

In June and September 1985, DHS conducted "worst case" scenario field experiments at the ring levee to determine if the asbestos present in the levee could pose a significant health risk. DHS forwarded the results to EPA which in turn forwarded the results to the Department of Health and Human Services, Agency for Toxic Substances Control and Disease Registry (ATSDR). ATSDR recommended that remedial measures be implemented to "stabilize those sites to prevent the asbestos from being suspended in the air where residents may inhale the fibers."

Based on the results generated by DHS' field experiments, DHS initiated an Operable Unit Feasibility Study (OUFS) to select a permanent remedy. Meanwhile, EPA agreed to implement interim remedial measures at the ring levee. EPA sprayed the ring levee with a polymer dust suppressant to control asbestos dust in May 1986.

DHS' OUFS was completed in April 1986 and recommended a clean soil cover for the levee. However, later that year, DHS determined that remedial funds were not available and referred the ring levee and the remainder of the site to EPA for further investigation and possible remediation.

EPA initiated a Remedial Investigation/Feasibility Study for the entire South Bay Asbestos site in 1986. The RI/FS should be completed in November 1988.

EPA sprayed the ring levee with a dust suppressing polymer again in 1987. In July 1988, the ring levee was sprayed again, this time by the City of San Jose.

In April 1988, EPA released the Operable Unit Feasibility Study (OUFS) on the Alviso ring levee for public comment. The OUFS, which drew upon the DHS study, identified in greater detail the two outstanding non-engineering issues confronting the remedial action: access and easements, and impacts to wetland and endangered species habitat. EPA data utilized in the OUFS was collected, analyzed, and reviewed in accordance with approved EPA Region 9 quality assurance procedures. Data quality limitations inherent in asbestos sampling and analytical methods were considered in EPA's interpretation and use of the data in the decision-making process.

Community Relations

All required community relations activities were conducted. A history of the community relations activities at the South Bay Asbestos Area, the background on the community involvement and concerns, and specific comments on the OUFS and EPA's responses are found in the Responsiveness Summary.

III. Enforcement Activities

EPA has identified two potentially responsible parties, the City of San Jose and Raische Company. San Jose constructed the levee and Raische Company was the supplier of the material. In July 1987, a general notice letter was sent to San Jose. Subsequent negotiations between EPA and San Jose have resulted in a CERCLA Administrative Agreement (Docket No. 88-15) in which San Jose agreed to spray the ring levee with a dust suppressant until a permanent remedy is selected.

In February 1988, EPA sent the Raische Company, the supplier of the fill material, a general notice letter. Special notice letters pursuant to CERCLA Section 122, were sent in August 1988. Negotiations are on-going with both parties for the remedial design and remedial action for the Ring Levee Operable Unit.

IV. Summary of Risks Posed by the Ring Levee

Asbestos is the contaminant of concern at this site. The ring levee has been identified as one of the primary sources of asbestos within the community. Concentrations of asbestos in the levee range from non-detect to 40% by area using polarized light microscopy.

Asbestos is a generic term referring to two groups of naturally-occurring hydrated silicate minerals having a fibrous crystalline structure. Chrysotile fibers belong to the serpentine group; actinolite, amosite, anthophyllite, crocidolite, and tremolite belong to the amphibole group. Commingtonite has the same composition as anthophyllite but belongs to a different crystal class, has higher specific gravity and contains more iron. Asbestos fibers are widely used for their high tensile strength and flexibility and for their noncombustible, nonconducting, and chemical-resistant properties. The fibers have been used in insulation, brake linings, floor tile, plastics, cement pipe, paper products, textiles, and building products.

Asbestos is one of the few known human carcinogens and also causes other lung diseases. Asbestos has been examined in numerous epidemiological studies. The diseases that have been identified are asbestosis, lung cancer and mesothelioma. Also associated with asbestos exposure in some studies are cancers of the larynx, pharynx, gastrointestinal tract, kidney, and ovary as well as respiratory diseases such as pneumonia.

Lung cancer is currently responsible for the largest number of deaths from exposure to asbestos. It has been associated with exposure to all the principal commercial asbestos fiber types. Excess lung cancer has been documented in groups involved with the mining and milling of asbestos and the manufacture and use of asbestos products. Studies in which the extent of exposure can be approximated provide evidence that lung cancer increases linearly with both level and duration of exposure.

Human studies have also shown that exposures to asbestos produce mesotheliomas, which are cancers that occur as thick diffuse masses in the serous membranes (mesothelia) that line body cavities. Mesothelioma occur in the pleura (the membrane that surrounds the lungs and lines the lung cavity) and the peritoneum (which surrounds the abdominal cavity). Epidemiology studies suggest that the incidence of mesothelioma is related to dose and time from first exposure.

Asbestosis, which involves fibrosis of lung and pleural tissues, is another serious chronic disease associated with exposure to asbestos. There is no effective treatment for asbestosis and it is often debilitating or fatal. Asbestosis can appear and progress decades after exposure to asbestos fibers. A full discussion of the health effects of asbestos is found in the EPA document Airborne Asbestos Health Assessment Update, June 1986.

Inhalation is the exposure route of concern for the asbestos present in the ring levee. The asbestos present in the soil must be rendered airborne and then inhaled to pose a health risk. The DHS field experiments showed that asbestos could be released into the air. DHS used mechanical means to simulate wind erosion and children playing on the ring levee. Such activity-specific sampling in this particular instance could be defined as an "acute worst case" scenario. The asbestos air concentrations as a result of the experiment clearly show that asbestos can be released from the ring levee and therefore, pose a potential health risk to people at or nearby the activity occurring on the ring levee.

One limitation of this study is that as an acute worst case, the study may over-estimate typical chronic exposures from activities involving the levee. Nonetheless, because asbestos is a known human carcinogen with no acceptable known threshold level for environmental exposure and that the potential for release of asbestos from the ring levee is high, EPA believes that a potential significant health risk exists from the levee. Therefore, remedial action is warranted.

V. Applicable or Relevant and Appropriate Requirements (ARARs)

Under Section 121(d)(1) of CERCLA, 42 U.S.C. Section 9621 (d)(1), remedial actions must attain a degree of clean-up which assures protection of human health and the environment. Additionally, remedial actions that leave any hazardous substance, pollutant, or contaminant on-site must meet, upon completion of the remedial action, a level or standard of control that at least attains standards, requirements, limitations, or criteria that are "applicable or relevant and appropriate" under the circumstances of the release. These requirements, known as "ARARs" may be waived in certain instances, as stated in Section 121(d)(4) of CERCLA, 42 U.S.C. Section 9621(d)(4).

Section 121(d) of CERCLA, 42 U.S.C. Section 9621(d) requires that the selected remedy complies with Federal and State substantive requirements. A less stringent level or standard of control may be employed if the remedial action is only part of a total remedial action (as is the case with the Ring Levee OUFS), that will attain such level or standard of control when completed. Additionally, the state requirements can be waived if a State has not consistently applied or demonstrated the intent to consistently apply a requirement in similar circumstances at other remedial actions within the state, CERCLA Section 121(d)(4)(E), 42 U.S.C. Section 9621(d)(4)(E). Federal, state or local permits do not need to be obtained for removal or remedial actions implemented on site, CERCLA Section 121(e), 42 U.S.C. Section 9621(E). "On-site" is interpreted by EPA to include the aereal extent of contamination and all suitable areas in reasonable proximity to the contamination necessary for implementation of the response action.

The definition of "applicable" and "relevant or appropriate" requirements from the National Contingency Plan (40 CFR Section 300.6 derived from 1986) ("NCP"). "Applicable" requirements are those clean-up standards, standards of control and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant or contaminant, remedial action, location, or other circumstances at a CERCLA site. "Relevant and appropriate" requirements are clean-up standards, standards of control and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well-suited to the particular site. For example, requirements may be relevant and appropriate if they would be "applicable" but for jurisdictional restrictions associated with the requirement.

The determination of which requirements are "relevant and appropriate" is somewhat flexible. EPA and the State may look to the type of remedial actions contemplated, the hazardous substances present, the waste characteristics, the physical characteristics of the site, and other appropriate factors. It is possible for only part of a requirement to be considered relevant and appropriate. Additionally, only substantive requirements need be followed (see the preamble to the National Oil and Hazardous Substance Contingency Plan, 40 CFR Part 300, 1985 Federal Register page 47,946). If no ARAR covers a particular situation, or if an ARAR is not sufficient to protect human health or the environment, then non-promulgated standards, criteria, guidance, and advisories must be used to provide a protective remedy.

There are three types of ARARs. The first type includes "contaminant specific" requirements. These ARARS set limits on concentrations of specific hazardous substance, pollutants, and contaminants in the environment. Examples of this type of ARAR are ambient water quality criteria and drinking water standards. A second type of ARAR includes location-specific requirements which set restrictions on certain types of activities based on site characteristics. These include restrictions on activities in wetlands, floodplains, and historic sites. The third type of ARAR includes action-specific requirements. These are technology-based restrictions which are triggered by the type of action under consideration. Examples of action-specific ARARs are Resource Conservation and Recovery Act (RCRA) regulations for waste treatment, storage, and disposal.

ARAR Identification Process

ARARs must be identified on a site-specific basis from information about specific chemicals at the site, specific features of the site, and actions that are being considered as remedies.

EPA and the State of California reviewed, respectively, federal and state laws, standards, requirements, criteria, and limitations for possible application to the Alviso Ring Levee, Operable Unit. Tables 2-1 and 2-2 in the OUFS contain a listing of the potential ARARs screened by EPA and the State. These charts identify each potential ARAR and whether or not it is "applicable" or "relevant and appropriate."

ARARs identified for the Operable Unit address emission of asbestos fibers from contaminated soils, inhalation of asbestos fibers, and disposal of contaminated soils.

Contaminant-Specific ARARs For Asbestos:

1. Toxic Substances Control Act (AHERA)

The AHERA final rules apply to asbestos abatement in schools. Local education agencies must determine if asbestos is present in concentrations greater than one percent using Polarized Light Microscopy (PLM) and determine what the appropriate response action will be.

2. Clean Air Act, National Emission Standard for Hazardous Air Pollutants (NESHAPs)

   Asbestos is identified as a hazardous air contaminant. NESHAPs regulations for inactive asbestos disposal sites require "no visible emissions" or specified types of containment cover to eliminate emissions.

3. Bay Area Air Quality Management District Regulations

   Similar to NESHAPs, this regulation (Reg. 11, Rule 2) requires "no visible emissions" and provides cover requirements and handling procedures for asbestos material.

Location-Specific ARARs:

Physical characteristics of the site influence the type and location of remedial responses considered. The location-specific ARARs relate to fish and wildlife, wetlands, floodplains, and activities in navigable waters.

1. The Endangered Species Act of 1973 and regulations at 50 CFR Sections 17, 402 (Section 7 Consultation) and 424

   When a project potentially impacts an endangered species or critical habitat, the Section 7 Consultation process is triggered. The formal process requires contact with USFWS to request a list of endangered species and critical habitat, preparation of a biological assessment that evaluates potential effects of the action, and formal consultation with USFWS that results in issuance of the USFWS biological opinion. Generally, under Section 7, activities carried out by Federal agencies should not jeopardize the continued existence of an endangered species or cause adverse modifications of critical habitat.

2. Clean Water Act, Section 404 (33 U.S.C. Section 1344) as regulated by the COE, and Executive Orders 11988, 11990, Protection of Wetlands and Floodplains

   The fundamental precept of the 404(b)(1) Guidelines (40 CFR 230 et. seq.) is that dredged or fill material should not be discharged into aquatic ecosystems (in this case wetlands) unnecessarily. The 404(b)(1) Guidelines require no discharge of dredged or fill material if 1) a practicable alternative exists that would have less or no adverse impact on the wetland; 2) the continued existence of an endangered species is jeopardized; 3) it causes or contributes to significant degradation to the wetland; or, 4) appropriate steps to minimize adverse impacts are not taken.

3. USFWS Mitigation Policy (FR 7644-7663, Vol. 46, No. 15, January 1981)

This is triggered in accordance with the Fish and Wildlife Act of 1956, Fish and Wildlife Coordination Act, Watershed Protection and Flood Prevention Act, and National Environmental Policy Act. The mitigation policy defines four resource categories and establishes mitigation goals and guidelines for each. USFWS has determined that the wetlands near Alviso would probably fall within Resource Category 2 for which the mitigation goal is no net loss of in-kind habitat value. Guidelines to achieve the goal include avoiding or minimizing habitat loss, immediate rectification or reduction of habitat loss, or replacement of in-kind habitat.

Action Specific ARARS:

1. Occupational Safety and Health Administration (OSHA)

OSHA has set a permissible exposure limit (PEL) for all asbestos fibers at 0.2 fiber per cc for occupational exposed workers. The action level is 0.1 fiber per cc.

VI. Description of the Alternatives

Alternatives Evaluation

EPA evaluated potential remedial action alternatives for the ring levee primarily by progressing through the series of analyses which are outlined in the National Contingency Plan (NCP), in particular, 40 CFR Section 300.68, the Interim Guidance on Superfund Selection of Remedy, December 24, 1986 OSWER Directive No. 9355.0-19). This process, in part, enables EPA to address the CERCLA Section 121 requirements of selecting a remedial action that is protective of human health and the environment, that is cost-effective, that attains Federal and State health and environmental requirements that are applicable or relevant and appropriate, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Additionally, CERCLA Section 121(B)(1) requires that EPA assess and give preference to permanent solutions and alternative treatment technologies or resource recovery technologies that, in whole or in part, will result in a permanent and significant decrease in the toxicity, mobility, or volume of the hazardous substance, pollutant, or contaminant. As part of this process, EPA evaluated permanent solutions to the problems associated with the asbestos present in the ring levee.

Based upon site characteristics, EPA was able to scope, from the universe of all possible response actions, a set of response actions and associated technologies to be considered for the Alviso ring levee. An example of this scoping was the elimination of biological treatment from further consideration because biological processes capable of detoxicifying asbestos contaminated soil do not exist. Section 2.4 of the OUFS discusses the scoping process in more detail and Section 2.6.1 summarizes the results.

The next step of the selection of remedy process is assembling the remaining technologies and/or disposal options into remedial action alternatives. Pursuant to OSWER Directive No. 9355.0-19, "Interim Guidance on Superfund Selection of Remedy," remedial action alternatives are to be developed ranging from those that would eliminate the need for long-term management (including monitoring) at the site to alternatives involving treatment that would reduce mobility, toxicity or volume as their principal element. In addition, containment options involving little or no treatment and a no action alternative are to be developed. Remedial action alternatives developed in the Operable Unit for the Interim Alviso Ring Levee were:

1. No Action
2. Soil Cover
3. Gunite Cover
4. Asphalt Cover
5. Chemical Soil Suppressant
6. Off-Site RCRA Landfill
7. Fixation
8. Vitrification
9. Plasma Fusion

Alternatives 2 through 4 are containment alternatives. Alternatives 2 through 5 require long-term management and monitoring. Alternative 6, permanent disposal of contaminated soil, would eliminate the need for long-term management, including monitoring. Alternatives 7, 8, and 9 involve treatment as their principal element. Finally, no action was included as Alternative 1.

Initial screening, which is the next step in the selection of remedy process, narrows the list of potential remedial action alternatives. Consistent with Section 300.68(g) of the NCP and the OSWER Directives No. 9355.0-19, the remedial action alternatives developed for the ring levee were initially screened using the criteria of cost, implementability (acceptable engineering practices), and effectiveness. Table 3-1 and 3-2 in the OUFS summarize the initial screening process. Alternatives 1, 2, and 3 passed the initial screening and were carried forward for detailed analysis while Alternatives 4, 5, 6, 7, 8, and 9 were screened out primarily for the reasons set forth below.

The Asphalt Cover, Alternative 4, was no longer evaluated because of the difficulty associated with implementation and the potential for oil leaching and contamination of the wetlands. The effectiveness of the Chemical Soil Suppressant, Alternative 5, is unknown. Because the chemical soil suppressant must be re-applied at least once every year and the present worth of this alternative is the second highest, and twice as high as the containment alternatives, this alternative was eliminated. Alternative 6, the Off-Site Landfill Alternative has also been screened out because capital costs are three to seven times more than the containment and cover alternatives (See Table 3-1 in the OUFS for cost comparison summary). Alternatives 7, 8, and 9 potentially fix or immobilize the asbestos within the soil. Weathering and traffic on the levee could free up fibers and significantly reduce the effective life of Alternative 7; therefore, fixation was eliminated from further analysis. Vitrification and plasma fusion have high costs and are difficult to implement. These high costs are reflective of the innovative processes involved. High ground water levels at the site further reduce the effectiveness of vitrification and limited expertise in the operation of a plasma fusion system further increases the difficulty in the implementation of the Plasma Fusion Alternative. Therefore, both vitrification and plasma fusion have been eliminated from further analysis.

The following is a description of the remedial action alternatives surviving the initial screening:

1. No Action Alternative

The No Action Alternative assumes that no remedial action would be taken to mitigate or eliminate asbestos emissions from the ring levee. Asbestos-containing levee soils would remain in their present state. The only actions which would be taken under this alternative would be posting warning signs, installation of barriers to prevent access across the levee, and periodic air quality monitoring. Signs would be placed to warn of the potential danger from human contact. Signs were placed along the levee by EPA when the hazard was first identified, but these signs have since been destroyed. A fence or suitable barrier would be placed between the levee and the community to prevent vehicle traffic on the levee. Air quality monitoring would include installation of four permanent air monitoring stations both up and downwind of the levee to characterize contaminant migration and assess the ongoing risk to human health and the environment.

2. Soil Cover

The Soil Cover Alternative involves stripping and rough grading the existing levee, placing a minimum of 12 inches of compacted soil over the levee, placing 6 inches of topsoil over the compacted soil, and revegetating the levee and side slopes. This cover thickness provides a significant root zone layer. Native vegetation will be selected for the levee that provides erosion protection and affords escape cover for the Salt Marsh Harvest Mouse. Temporary irrigation will be required to establish the vegetation. Irrigation options include using city water, a water truck, or pumping brackish water from the wetlands. A vehicle barrier (i.e., posts, barricades, riprap) will be incorporated into the final design to prevent access to the wetlands, and existing vehicle access routes to the wetlands will be fenced.

The best suited soil type for the 12 inch compacted soil layer on the levee is a clayey sand which is mid-range between a clay and a gravel. This soil type also allows a solid root zone to establish.

3. Gunite Cover

Gunite is a sprayed concrete mix that provides a hard, virtually impermeable textured surface when cured. The Gunite Cover Alternative involves stripping and rough grading the existing levee, placing a galvanized mesh or geogrid, and spraying gunite to a thickness of 2 inches on top and 1 1/2 inches on the sides. The thickness would vary on the side slopes, but should be no less than 1 1/2 inches. As for the soil cover, vehicle access barriers would also be required, such as a low fence constructed of lengths of telephone poles connected by heavy chain, to keep vehicles away from the levee.

4. Soil/Gunite Cover

It was determined that proper implementation of the Soil Cover would encroach onto private property, wetlands, and street right-of-ways. This alternative would require obtaining several permanent easements and it is felt that this process would be long in duration and involve several parties. Implementation of the Gunite Cover Alternative, on the other hand, would require mostly temporary construction easements but is likely to be less favorable than the Soil Cover Alternative in visible areas and wetland areas. The Soil/Gunite Cover Alternative was, therefore, developed, utilizing soil cover in high-visibility areas and gunite cover in areas with limited work space.

Consistent with Section 300.68(h) of the NCP, 40 CFR Section 300.68(h), the OSWER Directive No. 9355.0-19, and the OSWER Directive No. 9355.0-21, the remedial action alternatives remaining after initial screening were further refined and then subjected to detailed analysis. Detailed analysis of each remedial action alternative entailed evaluation based on several criteria. EPA identified appropriate and more specific "component measures" derived from requirements and criteria contained in Section 300.68(h)(2) of the NCP, 40 CFR Section 300.68(h)(2), CERCLA Sections 121(b)(1)(A - G), 42 U.S.C. Section 9621(b)(1)(A - G), CERCLA Section 121(c), 42 U.S.C. Section 9621(c), the discussion on detailed analysis contained in the OSWER Directive No. 9355.0-19 and the OSWER Directive No. 9355.0-21. These are the nine component criteria:

1. Protection of human health and the environment
2. Compliance with ARARs
3. Reduction of mobility, toxicity or volume
4. Implementability
5. Short-term effectiveness
6. Long-term effectiveness
7. Cost
8. Community acceptance
9. State and local agency acceptance

The following is a discussion comparing each alternative based on the nine criteria.

1. Protection of Human Health and the Environment

The No Action Alternative would not protect public health because sufficient remedial action to control the release of asbetos fiberts into the environment would not take place.

A cover such as alternatives 2, 3, and 4 could control the release of asbestos fibers into the environment. The theory is to provide a physical barrier between the contaminant and the potential receptors. A soil cover, Alternative 2, would provide immediate and long-term protection of public and the environment with adequate maintenance, as would the soil/gunite and gunite covers.

2. Compliance with ARARS

The No Action Alternative would not violate any of the identified ARARs, although the potential risk to human health and the environment would remain. If a remedial action is implemented, EPA will be required by 33 U.S.C. Section 1344 to take appropriate steps to minimize adverse impacts to adjacent wetlands. EPA has identified that the soil cover (#2) as opposed to the soil/gunite or gunite cover to be most appropriate. EPA can plant native vegetation on the soil cover to replace lost cover for the wetland wildlife in addition to implementing other types of mitigation to minimize the impact of the Operable Unit Remedial Action.

3. Reduction of Mobility, Toxicity or Volume

The No Action Alternative would not reduce mobility, toxicity, or volume. Alternatives #2, #3, and #4 would reduce the mobility of asbestos fiber into the ambient air; however, the Alternatives would not reduce the toxicity or volume of the asbestos fibers in the ring levee. At this point in time, no reliable treatment technology exists to reduce asbestos mobility, toxicity, or volume.

4. Implementability

One consideration of implementability is access to the site. For Alternatives 2, 3, and 4, three different types of land access or easements will be required. The first type is a temporary construction easement which allows access across or along a parcel or property to enter the construction site. The second type of easement is a permanent easement which is a purchase agreement allowing a structure or object, in this case the remediated levee, to occupy an owned parcel of land. A permanent easement is not a land purchase but rather a one-time payment to occupy the land area. When property is transferred from one owner to another, the permanent easement accompanies the sale or transaction. The third and final type of easement required is a maintenance or "right-to-access" easement which is a one-time purchase that allows access across a property (not necessarily the one in which the permanent easement is on) to maintain a structure or object on a permanent easement. Maintenance easements may stipulate that the disturbed lands area be restored to preconstruction or pre-remediation condition upon completion of the maintenance each and every time maintenance is performed or that a designated access route would be constructed and left in place for future maintenance.

The property which is covered by or adjacent to the present ring levee is owned by approximately 29 different private and commercial landowners or agencies. These landowners and estimates of easement costs are found in Appendix F of the OUFS. EPA has assumed that no easements would be purchased from the City of San Jose or from Santa Clara County. Costs for easements, including title searchs and site surveys, have been included in the overall cost estimate for each of the alternatives. Actual levee quantity calculation which show the amount of land affected are shown in Appendix E of the OUFS.

Soil Cover

Implementation of the Soil Cover Alternative utilizes conventional construction equipment and readily available materials. Difficulties are likely to be encountered in areas where there is limited access, and where side slopes are steep. Most of the existing levee borders private property and sometimes straddles property lines. In some areas, the levee is encroaching on street rights-of-way and protected wetlands. Construction of the

Soil Cover alternative would require an estimated 2.1 acres for permanent and maintenance easements, resulting in 1.5 acres of additional wetlands intrusion. The temporary construction easements would require six to eight construction access routes, most through private property. The work should be able to be performed without closing any streets; traffic may be restricted to one lane in some areas, particularly along School Street and Spreckles Avenue.

Gunite Cover

The most attractive feature of the Gunite Cover Alternative is its ability to be sprayed onto the levee, thereby reducing the number of required easements and access routes. This alternative would also generate less dust than the Soil Cover Alternative because there is less earthwork involved.

The Gunite Cover Alternative is particularly suited for those areas along the levee where the levee encroaches on street right-of-way, wetlands, and private property because it would be easy to apply with a minimal increase in volume. This alternative would require an estimated 1.0 acre for permanent and maintenance easements, resulting in 0.4 acres of additional wetlands intrusion. Several construction easements would still be required. Maintenance of this alternative would consist of yearly inspections and grouting of cracks resulting from foot and bicycle traffic, differential settlement, and seismic activity.

Soil/Gunite

This alternative was developed in part because of the difficulties involved in implementing the Soil Cover alternative due to limited access and permanent easements required.

A soil cover would be placed in wetlands areas to provide wildlife habitat and meet the community's aesthetic requirements. Gunite would be placed where slopes are very steep and where the cover encroaches onto roadways, such as parallel to Grand Avenue. The two methods would be tied together in final design to prevent loss of cover integrity at the juncture.

Temporary easements would be required to implement this alternative. Several permanent easements would also be needed. approximately six to eight construction access routes, mostly through private property, would be required. The work should be able to be performed with minimal traffic disturbances (i.e., possibly closing one lane on two land streets, particularly School Street and Spreckles Road). This alternative would require an estimated 1.4 acres of additional wetlands intrusion.

5. & 6. Short-term and Long-term Effectiveness

The No Action Alternative would not be effective in protecting the public health since no remedial actions would take place. Alternatives 2, 3, and 4 all provide a physical barrier between the contaminant and potential receptors. In general, the thicker the barrier, the less likely the chance asbestos will be released into the air. All alternatives have equal effectiveness in the short-term. Factors that could affect the long-term effectiveness and performance are 1) considerable seismic activity, 2) high-flood waters, 3) lack of maintenance, and 4) erosion. The Gunite Cover would withstand these four factors the best with the Soil/Gunite Cover next and the Soil Cover last. However, with proper operation/maintenance, barring natural disasters (flooding and earthquakes), the alternatives are estimated to be almost equally effective in controlling asbestos emissions from the ring levee.

7. Cost Analysis

The No Action Alternative is estimated to be the least costly alternative. The Gunite Cover, Soil/Gunite Cover combination, and Soil Cover alternatives are estimated to be comparable in cost. Complete removal and disposal of the levee is shown, since it is still under consideration by the PRPs. A more detailed breakdown and analysis of the estimated costs can be found in Appendices D and G of the OUFS.

No Action	$1,394,200
Soil Cover	$2,374,700
Gunite Cover	$2,383,900
Soil/Gunite Cover	$2,411,500
Off-site Disposal	$7,969,900

8. Community Acceptance

The community is not in favor of Alternatives 1, 3, and 4 as documented in the SBAA Operable Unit Responsiveness Summary (attached). The community prefers Alternative #2 and they want it implemented as soon as possible.

9. State and Local Agency Acceptance

There has been no state or local agency that has exhibited a preference for the No Action Alternative. The State of California Department of Health Services initially recommended a soil cover and their position has not changed. Other agencies have called for implementation of an alternative that controls the release of asbestos emissions. Out of the four alternatives, preference by other agencies has been for the soil cover as documented in the SBAA Operable Unit Responsiveness Survey (attached).

VII. Selected Remedy

This Record of Decision addresses the asbestos contamination present in the Alviso Ring Levee, Operable Unit of the South Bay Asbestos Area. EPA is undertaking an additional feasibility study to evaluate remedial action alternatives for the entire South Bay Asbestos Area and will complete a Record of Decision for the remedies selected. Prior to receiving public comment, EPA's preferred remedial action for the Ring Levee Operable Unit was Alternative #4, the Soil/Gunite cover. This alternative, however, was eliminated after concerns raised by the community regarding public safety and aesthetic appearance of the levee, and by USFWS regarding the gunite portion of the levee not providing cover for the Salt March Harvest Mouse, an endangered species living in the adjacent wetlands. EPA has, therefore, selected Alternative #2, the Soil Cover, as the appropriate remedy.

The Soil Cover consists of placing a minimum of 12 inches of compacted soil over the levee, and then placing 6 inches of topsoil over the compacted soil. A three foot wide path would be placed on top of the levee. The side slopes of the levee would be altered to have a 2:1 slope and then re-vegetated with native plants. These two measures should control erosion of the cover. The vegetated wetland side of the levee would provide cover for the endangered wildlife. Strict asbestos/dust control measures would be implemented during the entire construction operation. Access and easements will be obtained for 6-8 construction access routes. Operation and maintenance activities will be required to ensure the effectiveness of the soil cover. These activities include site inspections and possible repairs to the cover. Also included as an operation and maintenance activity is a review of the remedial action selected which, pursuant to CERCLA Section 121(c), 42 U.S.C. Section 9621(c), must be conducted every five years when a remedial action is selected that results in any hazardous material being left on site.

The estimated cost for the Soil Cover is $1,850,400. This estimate is based on 7,600 cubic yards of imported fill for reshaping the levee before constructing the soil cover to obtain 2:1 side slopes. Yearly maintenance is estimated to be $19,000 and the five year remedial action review is estimated to be $10,000. Present worth cost, based on design life of 30 years and an inflation rate of 4% and a rate of return of 4%, is estimated to be $2,374,700.

VIII. Statutory Determinations

Protectiveness

The Soil Cover would be protective of public health by creating a barrier over the asbestos contaminated soil which will control the release of the asbestos fibers. Proper operation and maintenance practices should ensure the integrity of the asbestos fibers.

Compliance With Other Regulations

Several ARARs define asbestos as a hazardous material. In addition, EPA must comply with OSHA Worker Exposure Standards during the implementation of the remedy. Finally, there are site-specific ARARs which will require EPA to solicit input on the remedial action from USFWS, to ensure that the remedial action selected is a practicable alternative which minimizes the impact to the wetlands, and finally to implement any mitigation required for the loss of wetlands and endangered species habitat for the remedial action.

EPA has solicited the input of its in-house wetlands section and USFWS during the development of the OUFS. Their comments and concerns are reflected in the OUFS Administrative Record. EPA will assure implementation of mitigation required by the ARARs, whether the clean-up is performed by EPA or the PRPs. If implemented by EPA, any cost incurred will still ultimately be the responsibility of the potentially responsible parties. Contemplated means of mitigating levee remedy impacts to wetlands include acquisition of lands similar to those impacted, and improving their aquatic values through restoration or enhancement techniques. All mitigation would be undertaken in consultation with federal and state resource agencies.

Cost Effectiveness

The Soil Cover is a cost-effective remedial action alternative which effectively minimizes threats to and provides adequate protection of public health and the environment. Although Alternatives 3 and 4 are equally protective, they do not satisfy the concerns raised by the community and USFWS.

Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

At this point in time, there is no known permanent alternative treatment or resource technology which would control the release of asbestos from the soil in the Alviso Ring Levee. Fixation, plasma fusion and verification were alternatives identified but eliminated from further consideration due to difficulties associated with implementation, uncertain long-term effectiveness and very high cost. The selected remedy is effective fectiveness and very high cost. The selected remedy is effective at controlling the release of asbestos from the soils in the Alviso Ring Levee with proper long-term maintenance and is relatively easy to implement at a reasonable cost. The soil cover once vegetated can also provide cover for the Salt Marsh Harvest Mouse and can be constructed to blend in with the surrounding community thereby satisfying concerns raised by U.S. Fish & Wildlife Service and the Alviso community.

The selected remedy will address the asbestos contamination at the Alviso ring levee. However, the selected remedy does not satisfy the statutory preference for treatment as a principal element. At this point in time there is no proven treatment technology which will reduce the mobility, toxicity, and volume of asbestos. Nonetheless, EPA considered several treatment technologies in the technology scoping and screening phase and in the initial alternative screen stage. However, no technology was found which would result in a permanent and significant decrease in the toxicity, mobility, and volume of asbestos.

IX. Future Actions

1) Design remedial action
2) Enter into a State Superfund Contract with the State of California
3) Obtain access and easements
4) Construct soil cover
5) Conduct operation and maintenance activities and the five year remedial action review required by CERCLA Section 121(c), 42 U.S.C. 9621(c)

X. Schedule

Dates for completing key milestones leading to remedial action at the Alviso ring levee are highlighted below:

1) Complete design by September 30, 1989,
2) Finalize State Superfund Contract by September 30, 1989,
3) Initiate remedial action no later than the second quarter fiscal year 1990.

SOUTH BAY ASBESTOS AREA SUPERFUND SITE

Administrative Record File Index
(Indexed by Document Number)

administrative Record Index
not included.

RESPONSIVENESS SUMMARY

FOR THE

INTERIM RING LEVEE OPERABLE UNIT FEASIBILITY STUDY

SOUTH BAY ASBESTOS AREA SUPERFUND SITE

ALVISO DISTRICT, SAN JOSE, CALIFORNIA

United States Environmental Protection Agency
Toxics and Waste Management Division
Region IX

October 1988

SOUTH BAY ASBESTOS RESPONSIVENESS SUMMARY
FOR THE
INTERIM RING LEVEE OPERABLE UNIT FEASIBILITY STUDY

SUMMARY OF MAJOR COMMENTS AND RESPONSES

INTRODUCTION

From April 12, 1988 through May 11, 1988, the U.S. Environmental Protection Agency (EPA) held a public comment period on EPA's draft Operable Unit Feasibility Study (OUFS) for the ring levee at the South Bay Asbestos Superfund site in Alviso, California. The Feasibility Study evaluates four alternatives for addressing asbestos contamination in the ring levee. Asbestos is a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §9601 et.seq. The purpose of the public comment period was to give interested parties the opportunity to comment on the OUFS. At the community meeting held in Alviso on April 28, 1988, EPA announced that a fifth clean-up alternative, which came into consideration following the release of the OUFS, also was being considered. To ensure that all interested parties would have a chance to comment on the four alternatives initially evaluated, as well as on the new fifth alternative, the public comment period was extended for two weeks from May 11, 1988 through May 25, 1988.

In the summer of 1987, EPA was planning to construct a permanent ring levee cover. EPA decided to conduct a more in-depth study on alternatives for addressing the ring levee contamination that would take into account wetlands preservation and cost estimates for levee access. The OUFS is the culmination of these efforts.

The purpose of the OUFS is to separate and accelerate the remediation process for the ring levee, since the levee contains asbestos and is in close proximity to the community. The various alternatives under consideration were evaluated on the basis of the following criteria: overall protection of human health and the environment; reduction of toxicity, mobility, and volume of contamination; short-term and long-term effectiveness; implementability; cost; community acceptance; State acceptance; and compliance with State and Federal regulations. Remedial alternatives for the entire site are examined in the site Feasibility Study Report, which will be issued later in 1988.

A Responsiveness Summary is required under 40 Code of Federal Regulation (CFR) Section 300.67(e) for the purpose of providing both EPA and the interested public with a review and summary of community concerns about the site and comments received by EPA on the OUFS. In addition to summarizing citizen concerns and questions, the Responsiveness Summary presents EPA's responses to those concerns.

The Responsiveness Summary for the OUFS conducted at the South Bay Asbestos site is divided into three sections:

I. Background on Community Involvement and Concerns. This section provides a brief history of community interest in and concerns about the South Bay Asbestos site.

II. Overview of the Ring Levee OUFS. This section provides a brief history of the ring levee, summarizes the contents of the draft OUFS, and identifies EPA's preferred alternative.

III. Summary of Comments Received and EPA Responses. This section categorizes and summarizes written and oral comments received during the public comment period and provides EPA's responses to these comments.

Appendix A contains an index and a copy of the question and answer period pages from the public hearing transcript and a copy of all written comments received by EPA during the OUFS public comment period.

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

In 1983, State health officials gave the Alviso community its first information about the asbestos contamination problem. Although Department of Health Services (DHS) representatives released information about the possible health effects posed by the site, and the problem received significant media attention, the community in Alviso did not express concern about exposure to asbestos at that time.

In January 1984, DHS held a public meeting in Alviso about the asbestos contamination problem. The topics discussed were the history and current status of the asbestos problem in Alviso, health effects of exposure to asbestos, and future plans to investigate the contamination. One of the results of the meeting was the establishment of a Community Advisory Committee comprised of concerned residents from Alviso and representatives from DHS and the Santa Clara County Health Department.

The purpose of the Community Advisory Committee was to provide a useful forum to improve communication between the agencies and the community and to provide information about precautions the community should take to minimize exposure to asbestos. The group met during 1984 and 1985, when DHS was conducting soil sampling and air monitoring throughout the area.

In the fall of 1985, community attention on asbestos contamination peaked again when EPA took emergency action and paved two areas in Alviso to control the release of asbestos. A portion of the community expressed the concern that EPA was acting in conjunction with San Jose city officials and influential leaders to condemn the town and relocate residents so that Silicon Valley development might spread into Alviso.

EPA community relations staff visited a broad spectrum of Alviso community members in November and December 1985 to explain EPA's practice of considering a range of alternatives in response to a release of hazardous substances. EPA staff emphasized that the Superfund investigation would help define the seriousness of the public health threat posed by the presence of asbestos, and that the community would have the opportunity to be involved in the decision about the best clean-up alternative to mitigate the asbestos problem.

Based on meetings with community leaders, EPA held a community meeting in December 1985 to address the residents' concern that EPA intended to condemn Alviso as a result of the Superfund Remedial Investigation/Feasibility Study (RI/FS). Following the community meeting held in December 1985, the Community Advisory Committee expanded to include EPA and continued to meet (although somewhat infrequently) to the present date.

Community concerns related to asbestos contamination found in Alviso are influenced by the area's history, economic status, and social fabric. The major concerns of the community, as identified in the November 1986 Community Relations Plan and at community meetings, are as follows:

Possible relocation of Alviso residents. Residents are aware of the strategic location of Alviso in relation to Silicon Valley. The power and influence of outside interests (e.g., city planners and officials, private developers, and real estate investors) are feared by many residents because they feel they will not be included in the benefits of high-technology development. Some residents contend that EPA and local and State governments are part of a conspiracy to deflate land values or to condemn properties so that Alviso property can be acquired by development interests at low prices.

Severity of threat actually posed by asbestos. Many residents in Alviso feel that asbestos is a widely found substance and question why Alviso has been "singled out" for investigation. A widely held belief in the community is that Alviso is receiving attention not because of a potential health hazard, but because asbestos contamination can be used as a justification to condemn the land, relocate residents, and develop the area with high-technology industries.

Dust raised by traffic through town. Residents are concerned about the amount of dust raised by trucks, and the potential human health effects associated with exposure, as well as the fact that the dust might contain asbestos. Others suggest that the trucks might be hauling asbestos-rock or other asbestos-containing material that may contribute to the airborne asbestos problem.

Length of time investigations take. Referring to sampling activities performed by DHS, the Bay Area Air Quality Management District, and EPA, several residents criticized the government for over-studying the problem and spending too much taxpayer money.

Decrease in property values. Many residents are concerned that property values have decreased due to the asbestos problem. Others are concerned about the "unsightly" appearance of the ring levee. If EPA seals asbestos on private property, residents are worried that they will be held liable for asbestos that becomes airborne if the seal is broken.

Local media have presented limited coverage on asbestos contamination in the Alviso area. The coverage has focused primarily on two events. The first event occurred in 1983 when DHS initially informed the Alviso community about the asbestos contamination problem and the possible health effects. The second event occurred in the fall of 1985 when EPA took emergency action and paved two areas in Alviso -- the school yard at George Mayne School, and Spreckles Avenue -- to control asbestos dust. The community reacted strongly to an article in the San Jose Mercury News that suggested that area residents might be relocated. Media coverage has been relatively infrequent since this event.

The following is a summary of community relations activities conducted at the South Bay Asbestos Superfund site since 1985:

October 1985	EPA distributed a fact sheet informing the community about EPA's Emergency Response Actions -- the paving of George Mayne School, and Spreckles Avenue.
November/ December 1985	EPA CR representatives visited community members to explain EPA's practice of considering a range of alternatives in response to a release of hazardous substances. EPA's Emergency Response Actions also were discussed at this time.
December 1985	EPA distributed a fact sheet to explain the short- and long-term options EPA can use at a Superfund site for emergency or remedial response actions. The fact sheet also explained the Superfund process for remedial actions.
December 12, 1985	EPA held a community meeting to explain the recent actions taken by EPA to investigate and control asbestos contamination in Alviso.
December 1985/ January 1986	EPA CR representatives conducted community assessment interviews to improve EPA's understanding of community concerns. These interviews provided the basis for the South Bay Asbestos Community Relations Plan.
May 1986	EPA prepared and presented information to school assemblies on the potential dangers associated with using the ring levee for recreational purposes.
June 12, 1986	EPA held a community meeting to evaluate alternatives for controlling asbestos in three areas of Alviso: the ring levee, the truck yards, and local streets.

June 1986	**EPA distributed a fact sheet providing information to the public on the Alviso soil sampling results.**
November 1986	**EPA completed the final Community Relations Plan.**
March 1987	**EPA distributed a fact sheet announcing the beginning of the Remedial Investigation at the site.**
March 1987	**EPA held a Community Advisory Committee Meeting (that included all interested community members) to discuss plans for the Remedial Investigation/Feasibility Study.**
June 1987	**EPA distributed a notice announcing that the ring levee would be sprayed with polymer to prevent dust migration.**
March 1988	**EPA distributed letters to individual property owners informing them of the December 1985 soil sampling results.**
April 1988	**EPA distributed a fact sheet summarizing the draft Ring Levee Operable Unit Feasibility Study (OUFS).**
April 28, 1988	**EPA held a community meeting to discuss the draft OUFS and EPA's proposed clean-up solution, and to accept public comments on the selection of a remedy.**

II. OVERVIEW OF RING LEVEE OUFS

During a major flood in March 1983, the City of San Jose constructed a flood control ring levee around most of the community of Alviso. The levee was built to try to divert flood waters away from Alviso. Through soil sampling and analysis, EPA has found that much of the ring levee is contaminated with asbestos-containing rock and soil.

EPA is conducting a Remedial Investigation/Feasibility Study (RI/FS) to determine the nature and extent of contamination from hazardous substances, the extent to which contamination may pose a threat to human health and the environment, and to determine the necessity for and the effectiveness of the proposed remedial action. Field investigations, performed during 1987 and 1988, will also be summarized in the upcoming RI/FS.

Preliminary data from the RI/FS, indicating that the ring levee contained asbestos, prompted EPA to separate and accelerate the remediation process for the levee and prepare a ring levee OUFS.

As an emergency response action, the ring levee was sprayed with a chemical polymer to control asbestos dust in May 1986 and July 1987. The City of San Jose (San Jose) took over responsibility for the polymer spraying in CERCLA Consent Order 88-15. San Jose sprayed the levee with the polymer in 1988. In

order to provide a permanent remedy for control of asbestos dust from the ring levee prior to completion of the larger site remediation for the South Bay Asbestos site, EPA determined, in accordance with 40 CFR §300.68(c), that an OUFS should be conducted to address remediation for the ring levee only.

The OUFS for the South Bay Asbestos site evaluates potential remedial action technologies for the flood control ring levee. Alternatives were identified and evaluated through the series of analyses outlined in the National Contingency Plan (NCP) (40 CFR §300, et.seq.). Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §9621, requires EPA to select a remedy that is protective of human health and the environment, that is cost-effective, that attains Federal and state requirements, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Additionally, EPA is required to give preference to treatment remedies that permanently and significantly reduce the mobility, toxicity, or volume of hazardous substances as their principal element. Finally, EPA must consider state and community acceptance, the short-term and long-term effectiveness, and the implementability of the chosen remedy prior to implementation.

A wide range of clean-up alternatives were initially studied to address the asbestos contamination problem in the ring levee. They fell into three general categories: no action, containment, and treatment. The no action alternative would result in no remedial action taking place at the site. The containment alternatives would use a physical barrier to control the release of asbestos fibers. The treatment alternatives would involve treating the asbestos-contaminated soil to render the asbestos either immobile or non-hazardous.

In addition to the four alternatives discussed in the OUFS, a fifth alternative was considered in negotiations with one of the potentially responsible parties. This alternative involves removing the existing levee and possibly replacing it with a similar structure not containing asbestos.

EPA's preferred alternative was, as announced in the "proposed plan" fact sheet released for public comment along with the OUFS on April 12, 1988, initially a combination gunite/soil cover. Due to community concern that this alternative would create aesthetic problems in Alviso and that the hard surface could cause injury to children, in addition to the fact that this alternative was unpopular with the U.S. Fish and Wildlife Service, EPA selected the soil cover (with no gunite) as the remedy for the ring levee. A footpath will be placed on top of the cover, and the soil will be vegetated to prevent erosion. The soil cover will satisfy State and Federal regulatory agencies' concern about wildlife habitat. This alternative is expected to control asbestos emissions from the levee, bringing about immediate and long-term protection to human health and the environment. Dust control techniques also will be used during implementation to minimize the risks associated with airborne asbestos. The capital cost of the soil cover alternative is estimated to be $1,850,400.

III. SUMMARY OF COMMENTS RECEIVED AND EPA RESPONSES

For purposes of simplification, EPA has categorized the comments (and responses to those comments) as follows:

(A) Comments made by the Raisch Company;
(B) Comments made by the City of San Jose;
(C) Comments made by Government Agencies;
(D) Comments made by Members of the Interested Public; and
(E) Comments made at the April 28, 1988 public meeting.

Each of these categories is presented, in turn, below.

III(A) COMMENTS MADE BY THE RAISCH COMPANY:

Comment:

1. The Raisch Company expressed "its strong objection to the inadequate time allowed to prepare and submit comments on the OUFS."

EPA Response:

EPA is required by the NCP (40 CFR §300.67(d)) to provide not less than 21 days for public comment on the OUFS. EPA provided 43 days in this case. EPA believes that its public comment period was adequate.

Comment:

2. The Raisch Company objected to delays in notifying it of its PRP status. Indicating that the site was first listed on the NPL in 1984, and that the City of San Jose was first notified in 1985, The Raisch Company questioned the reasons for delaying this notification until February 1988. The Raisch Company further asserted that EPA violated Section 113K(2)(D) of CERCLA by not notifying it sooner regarding its status as a PRP.

EPA Response:

EPA notified Raisch as soon as it made its determination that Raisch was considered a PRP.

Comment:

3. The Raisch Company commented that "the failure of EPA to notify The Raisch Company at an earlier date has prevented and prohibited the company from participating in the extensive

studies, investigations, and other activities that have led to the issuance of the...OUFS."

EPA Response:

See the response to comment 2. EPA has neither prevented nor prohibited Raisch from participation. EPA welcomes Raisch's participation.

Comment:

4. The Raisch Company also stated that allowing "a response period of less than six weeks is not only inadequate, but it appears as an attempt by the Environmental Protection Agency to prohibit The Raisch Company from creating an adequate administrative record to defend against future EPA actions regarding the site." Moreover, The Raisch Company stated that, "the inadequate time allowed to respond to the OUFS...constitutes a violation of Section 113K(2)(B)(ii)" of CERCLA.

EPA Response:

See responses to comments 1 and 2. EPA has considered Raisch's comments. EPA has gone beyond the requirements of CERCLA §113K(2)(B)(ii).

Comment:

5. Citing EPA's reliance on technical data in the OUFS, The Raisch Company requested "adequate time to retain their own technical experts to review and comment on the studies relied on by the authors of the OUFS." Moreover, The Raisch Company stated that the time allowed for comment, combined with "EPA's delay" in including The Raisch Company as a PRP, "practically prohibits" the use of outside consultants and technical experts in the review process.

EPA Response:

See the response to comment 3.

Comment:

6. Asserting that EPA failed to allow adequate time to create an administrative record and submit appropriate comments, The Raisch Company stated that the ongoing RI/FS for the entire Alviso South Bay Asbestos site will be "prejudged by the remedial action selected in the OUFS process."

EPA Response:

The intent of the Operable Unit is to control the release of asbestos fibers from the ring levee. The RI/FS is intended to evaluate the entire site and will, of course, take into account the Operable Unit. However, the RI/FS will not be "prejudiced" by the Operable Unit. Raisch will be able to comment on the RI/FS during the RI/FS comment period.

Comment:

7. Pertaining to asbestos health risks, The Raisch Company indicated that the OUFS makes no mention of the different types of asbestos existing in the environment nor does it mention the different health risks associated with the different asbestos types (serpentine and amphibole). Moreover, Raisch stated that "there is uncontrovertible evidence that the serpentine group (chrysotile) is far less hazardous than the amphiboles and that its production and use can and is being successfully regulated." Stating that serpentine formations are widespread throughout California, Raisch incorporated by reference the following five exhibits as evidence of the different health risks associated with the two asbestos groups:

- Article from California Mining dated September 1986;
- "Geological Occurrences and Health Hazards of Amphibole and Serpentine Asbestos," by Malcolm Ross of the U.S. Geological Survey;
- Article from the British Journal of Industrial Medicine dated 1980, entitled "Dust Exposure and Mortality in Chrysotile Mining, 1910-75;"
- Letter from Robert G. Coleman, Ph.D., of Stanford University dated March 25, 1986, addressed to Board Secretary, California Air Resources Board; and
- Letter from Malcolm Ross of the U.S. Department of Interior dated February 28, 1985, addressed to Dr. Bernard D. Goldstein of EPA.

The Raisch Company further stated that "the conclusion can be drawn from the attached reports that the concentrations of chrysotile asbestos found in the air in Alviso does not constitute a significant health risk."

EPA Response:

EPA's position is that all types of asbestos are potentially carcinogenic to humans. EPA has determined that asbestos is a hazardous substance for the purpose of CERCLA. See 40 CFR §302.4. High rates of lung cancer in asbestos workers have been related to all types of asbestos, including chrysotile. This position is supported by many asbestos research publications, including "Airborne Asbestos Health Assessment Update" (USEPA, 1986, publication 600/8-84-0031), prepared by Dr. William Nicholson of Mt. Sinai Hospital. Current Federal regulations regarding asbestos in schools (Asbestos Hazard Emergency Response Act, under Title II of the Toxic Substances Control Act) also concludes that all asbestos types are hazardous (Federal Register, Vol. 51, No. 19, Jan 29, 1986, Supplementary Information). The National Research Council ("Non Occupational Health Risks of Asbestiform Fibers," National Academy Press, 1984) reports the following:

"Results of studies of various groups of workers indicate that it is extremely difficult to assess the role of fiber type (i.e., chrysotile or [amphibole]) in determining the risk for developing either lung cancer or mesothelioma... Some scientists have interpreted the available epidemiological data to indicate that chrysotile asbestos, the asbestos type most commonly used in the U.S., is less hazardous than the other types of asbestos, especially crocidolite... However, in view of the laboratory evidence and great uncertainty about the nature of the fibers of asbestos to be found in nonoccupational exposure situations, the committee decided not to differentiate among them in the quantitative risk assessment. Furthermore, some of the apparent discrepancies [in cancer potency] may be explained by differences in physical properties of the fibers, fiber concentration, and their characteristics."

Thus, EPA does not agree with Raisch's assertion that chrysotile is less hazardous than other types of asbestos. EPA has studied the five exhibits entered into the record by the Raisch Company but believes that sufficient data exists to show that chrysotile is harmful.

Comment:

8. Under a heading entitled "Air Monitoring," The Raisch Company stated that the air monitoring done to date is "inadequate to support any remedial action for the ring levee." Raisch further stated that "the sampling did not take into account what type of asbestos fibers were found in the air." Citing the Woodward-Clyde report, Raisch stated that "the testing they undertook failed to distinguish and/or isolate asbestos originating from other activities in Alviso from naturally

occurring asbestos in the ring levee." Furthermore, stating that serpentine rock is California's most prevalent rock, Raisch argued that "it is very likely that had the same tests conducted by DHS been conducted on any exposed serpentine rock anywhere in California that similar results would have been obtained." In summary, The Raisch Company stated that "the ambient air testing done to date in Alviso has failed to isolate the ring level [sic] as the source of asbestos in the air in Alviso and has failed to demonstrate that the ambient air concentrations of asbestos in the Alviso area are significantly different than in the surrounding San Jose area."

EPA Response:

EPA acknowledges that, based on existing data, the ambient air in Alviso may not be significantly different than air in San Jose. The results of the overall RI/FS investigation, which will be presented later this year, appear to indicate that wind erosion and suspension of asbestos particles by wind may not be the primary mechanism for transporting asbestos from the ground into the air. This is supported by the Woodward-Clyde report that shows that even with samplers directly upwind and downwind of the levee, asbestos results varied, sometimes showing higher fiber counts upwind. EPA believes that mechanical activity, such as driving, bicycling, or digging, may be primarily responsible for disturbing the soil and releasing fibers which can be inhaled. Thus, the rationale for acting to remediate the levee is concern over the potential exposure to individuals who might inhale asbestos fibers released from the levee during soil disturbance. Similar asbestos conditions elsewhere in the State do not preclude EPA from taking action in Alviso, where the potential for exposure is high, due to the proximity of the town and the condition of the levee. The site data collected by EPA show that the asbestos fibers found in the soil are chrysotile and are the same as the fibers found in the air. Thus, Raisch's comment about the Woodward-Clyde report is incorrect.

Comment:

9. The Raisch Company stated that the OUFS "failed to discuss several practical, feasible, and cost-effective remedial action alternatives ..." Furthermore, Raisch stated that, in some cases, the OUFS "does not adequately address the remedial action alternatives identified."

EPA Response:

The OUFS was prepared following the guidelines outlined in the NCP (40 CFR Section 300.68), guidance documents issued by EPA's

Office of Solid Waste and Emergency Response (OSWER Directives 9355.0-19 and 9355.0-21), and EPA's guidance on Feasibility Studies issued in March 1988. These documents dictate the procedures that must be followed to identify a range of remedial action alternatives. Page 2-23 of the OUFS defines the remedial action technologies that were selected for screening. Under the regulations and guidance documents, these technologies must range from No Action to innovative treatment options. Several practical, feasible, and cost-effective options were included and discussed in the OUFS. Each alternative was adequately addressed as mandated in the guidance quoted above. In addition, Raisch did not identify any other specific "alternatives" that it wanted EPA to consider.

Comment:

10. In reference to the No Action Alternative (Alternative 1), The Raisch Company stated that "no demonstration has been made that there are adverse health effects from chrysotile asbestos in the concentrations found in the ambient air at the Alviso site." Raisch further stated that "the ambient air testing has failed to isolate the ring levee as the source or a source of asbestos in the ambient air at Alviso..." Furthermore, Raisch stated that "evidence is not presented to indicate that the concentrations of asbestos in the air in Alviso are significantly different than concentrations in the Greater San Jose area." For these reasons, The Raisch Company asserted that the selected alternative should instead be No Action.

EPA Response:

As stated in previous responses, EPA does not regulate specific asbestos types differently, and is officially committed to considering all asbestos types hazardous substances. It is true that the OUFS did not isolate the ring levee as the source of asbestos in Alviso's ambient air. However, EPA is concerned that direct disturbance of levee soils which have demonstratively high (up to 40% by area) asbestos levels, and inhalation of asbestos from the resulting dust, are potential health risks requiring remedial action.

Comment:

11. Under the heading "Chemical Soil Suppressant," The Raisch Company stated that the use of chemical soil suppressants is discussed in the OUFS only in terms of "its potential permanent application" and that its use to date has been "markedly successful." Raisch therefore asserted that its continued application "would be the most logical and rational approach to

the ring levee" until the conclusion of the RI/FS and selection of a permanent solution for the entire site. Raisch stated that "such an approach is the only alternative that has no potential of being in direct conflict with an ultimate solution for the ring levee, whatever that may be." Raisch asserted that continued application of soil suppressant "is also consistent with a City of San Jose and Army Corps of Engineers' plan for flood control improvements to the Coyote and Guadalupe Rivers in the Alviso area," because "it is believed that once these flood control measures have been implemented...the need for the levee would no longer exist and it could then be removed..."

EPA Response:

EPA has used the soil suppressant as a temporary control measure until a permanent, cost-effective remedy is selected. In order to select a permanent remedy, EPA conducted an OUFS which identified several permanent alternatives. Each alternative was evaluated by several criteria as mandated by CERCLA. The objective of the remedy selected will be to control the release of asbestos fibers from the levee soils. Such a remedy is consistent with the possible remedial alternatives being identified for the rest of the South Bay Asbestos Area.

EPA understands that the City considers the ring levee a necessary flood control measure, because neither the City nor the Army Corps of Engineers has expressed contrary views. EPA will not implement the removal and replacement of the ring levee, because equally effective alternatives exist which are more cost-effective. EPA would consider the removal of the ring levee if the PRPs were committed to completing the tasks at their own expense and under EPA supervision.

Comment:

12. The Raisch Company, citing discussions between the City of San Jose and the Army Corps of Engineers regarding the possible incorporation of the existing levee "into a larger and more permanent levee structure," stated that if this project proceeds, "the existing levee would be an ideal base for a new levee." The Raisch Company asserted that, in this case, "the ring levee would be covered with more than ample material to prevent the escape of any asbestos containing materials into the air." Raisch further asserted that incorporating the existing levee into a permanent levee "would be far and away the most cost efficient and practical method of construction of a new permanent levee," and that the OUFS should have considered this alternative.

EPA Response:

EPA did not address the "ultimate levee" or large-scale permanent levee as an alternative for the following reasons: First, EPA's responsibility at the site is to address the problems of asbestos contamination, not flood control. Second, the possibility that the "ultimate levee" would be built appears highly uncertain; no source of funding for construction has been identified, the City of San Jose is unable to commit to a date of construction, and the Army Corps of Engineers would have to approve the project, given its location in wetlands. For these reasons, the "ultimate levee" was not considered as an alternative.

Comment:

13. The Raisch Company asserted that "a practical, permanent and cost effective solution to any risk created by the ring levee would be to remove the material comprising the ring levee to a nearby highway construction project where the material would be utilized as a base fill and covered with sufficient non-asbestos containing material and/or sealed with asphalt in conjunction with such a project to prevent the future escape of any material into the atmosphere." In support of this assertion, Raisch stated that the material is "not inherently hazardous but can become hazardous if released to the atmosphere and inhaled in high concentrations over long periods of time," and that "if the asbestos containing rock has no potential for release to the atmosphere, it becomes non-hazardous." The Raisch Company further stated that relocating the levee material to a highway construction project "permanently removes the material from the Alviso area and disposes of it in a manner where the material is rendered non-hazardous." Finally, Raisch stated that such a process is also "the most cost effective alternative and minimizes any transportation problems related to any other removal alternative (i.e., to a permitted facility)."

EPA Response:

Although EPA has determined that placement of the levee in a RCRA-approved landfill, _if_ off-site disposal were chosen, is not necessary, a California certified Class II landfill would be required as a disposal site, since asbestos is classified as a toxic contaminant by the State of California. The requirements of Class II disposal, as promulgated under California law, would apply to the levee. Any disposal site other than a Class II landfill such as a construction site, would not be feasible under the law, absent a waiver by the State. Thus, the option of removing the contaminated fill to a highway project could not be considered.

Comment:

14. Alternatively, The Raisch Company asserted that the material could be "returned to its 'quarries of origin' for future use as fill material under circumstances protecting escape of asbestos into the air." Raisch stated that "the ability to work with asbestos containing serpentine in a safe manner is clearly demonstrated in the Summary Report, entitled 'Serpentine/Asbestos Public Health Analysis.'" The Raisch Company attached this report to their comments for the record. Furthermore, Raisch cited the following provision in Section 122(b)(1) of CERCLA:

> "Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity, or mobility of hazardous substances, pollutants and contaminants is a principle element and are preferred over remedial actions not involving such treatment."

Following this citation, The Raisch Company included the following incomplete sentence:

> "These latter two alternatives, i.e., removal to a nearby project site and/or removal to the quarries of origin"

Presumably, Raisch intended to state that these latter two alternatives are more consistent with the cited provision of CERCLA than is the preferred alternative. The Raisch Company stated that removing the material to a suitable construction site or to the quarries of origin "are consistent with other Federal laws and regulations and remove all problems associated with leaving the levee in place." Finally, citing that "no Bay Conservation and Development Commission permit was obtained, no Environmental Impact Report was done prior to construction of the levee, no 404 Clean Water Act permits were obtained and no wetland mitigation provided," Raisch stated that "removal of the levee resolves all of these problems."

EPA Response:

Removal of the levee to the quarry of origin would not be consistent with State law, absent a waiver, as stated in the previous response. Removal and off-site disposal in a quarry does not constitute treatment. Treatment options discussed in the OUFS include in-situ vitrification, fixation, and plasma fusion. EPA feels that removal of the levee to an appropriate facility involves more cost and implementation risks (during excavation and transportation) than would a soil cover that reduces and controls asbestos exposure.

III(B) COMMENTS MADE BY THE CITY OF SAN JOSE:

Comment:

15. The City of San Jose asserted that the OUFS is "substantially deficient," and that it cannot, therefore, "serve as a basis for decision." The City further stated that "more work will be required before the OUFS can be said to be adequate to the task of analyzing the risks and providing an adequate evaluation of the appropriate remedial actions."

EPA Response:

The OUFS report was prepared following all requirements of CERCLA as amended by SARA and the National Contingency Plan (40 CFR §300.68). Page 2-1 of the OUFS cites the guidance documents on which the OUFS is based. All requirements governing an OUFS have been met. The ring levee was separated from the rest of the site as an operable unit because EPA believes that the levee poses a significant potential risk from asbestos exposure. The OUFS report provides sufficient information to make decisions regarding risk from asbestos.

Comment:

16. Specifically, the City of San Jose stated that "the OUFS does not properly address the question of causation, i.e., whether whatever asbestos that is present in various other parts of Alviso (including the atmosphere) came from naturally occurring chrysotile asbestos contained in the serpentine rocks and soil in the levee." The City submitted that "there is considerable evidence that much, if not all, asbestos which may be found in Alviso came from sources other than the levee."

EPA Response:

EPA's studies at the site have shown that samples from different sources or locations have the same type of chrysotile asbestos fibers, that is, the source of asbestos at the site either naturally-occurring or processed, cannot be distinguished by fiber size, morphology, or mineral type. Thus, EPA has seen no evidence that "most if not all" asbestos came from non-ring levee sources. The OUFS report focuses on the ring levee specifically, because of the significant potential for asbestos exposure due to disturbance of and/or inhalation of levee soils containing asbestos.

48

Comment:

17. The City of San Jose stated that the chrysotile asbestos in the levee poses no different health hazard, nor should be treated differently, than if the levee were a natural formation. The City further asserted that "EPA has inadequate information to conclude that a health risk may exist in Alviso as a result of the serpentine rocks and soil in the levee."

EPA Response:

The ring levee is distinguished by EPA from a natural formation, because it has been physically altered, removed from its original location, and transported to the site. Thus, EPA justifiably considers it to be different than a natural formation. See CERCLA §§104 and 121, 42 U.S.C. §§9604 and 9621. Furthermore, the proximity of the levee to the site residents and the potential exposure to asbestos from the levee is of concern. The information in the OUFS demonstrates that a potential health risk from the levee exists.

Comment:

18. The City of San Jose asserted that "critical engineering questions have not been adequately examined."

EPA Response:

The purpose of the OUFS is to present information regarding the feasibility of various remedial options. The actual design of the remediation, including engineering specifications, will be presented in the Remedial Design Report, which follows the Record of Decision (ROD). With the exception of the issues addressed below, the "critical engineering questions" mentioned in the comment have not been specified, so that specific responses are not possible.

Comment:

19. The City of San Jose stated that "the OUFS fails to examine the flood control ramifications of the proposed remedial alternatives." The City asserted that the OUFS must include, for each alternative, engineering analysis pertaining to the associated risks of flood damage.

EPA Response:

EPA's role, under the Superfund program, is to remediate the potential risks to human health, welfare, and the environment caused by hazardous substances, pollutants, or contaminants.

See CERCLA §§104 and 121, 42 U.S.C. §§9604 and 9621. Although flooding at the site is a potential hazard, EPA's responsibilities under CERCLA extend only to the risks from hazardous substances, pollutants, or contaminants, not from flooding. In any event, each alternative examined in the OUFS would only improve the levee in terms of stability and resistance to flood erosion. It is important to note that since the levee is not continuous around the town (Los Esteros Road, Grand Boulevard, and Taylor Road pass through the levee at an elevation lower than the levee), its flood function may be incomplete. Any damage to the remediated levee due to floods would be repaired as part of long-term operations and maintenance.

Comment:

20. The City of San Jose further stated that "compaction tests should be conducted prior to any decision to add cover to the levee."

EPA Response:

Compaction tests would be performed as part of the remedial design and actual construction phases of the project.

Comment:

21. The City of San Jose asserted that EPA "commits a fundamental error" in considering the ring levee to be a hazardous waste site. The City contends that the site should be considered a "community structure," as defined in 42 U.S.C. §9604(a)(3)(B). The City stated that "its character as a waste is questionable: It is soil and dirt, containing naturally occurring, unprocessed, unmanufactured serpentine material, which contains chrysotile asbestos."

EPA Response:

The ring levee falls within the definition of "facility" under CERCLA §101(a), 42 U.S.C. §9601(a). A facility includes, "any site or area where a hazardous substance has been deposited... or otherwise came to be located..." Asbestos, whether processed or unprocessed, is a hazardous substance, pursuant to 40 CFR §302.4 and CERCLA §101(14), 42 U.S.C. §9601(14). Both processed and unprocessed asbestos can pose a health hazard. Since the asbestos here was deposited on the ground from the ring levee, the levee is unquestionably a "facility." Thus, the city's assertion that the ring levee is not a hazardous site is incorrect.

The City's second comment, that the levee should be considered a community structure is also incorrect. CERCLA §104(a)(3)(B), 42 U.S.C. §6604(a)(3)(B), limits response actions for "products which are part of the structure, and result in exposure within residential buildings, business, or community structures..." The term community structures refers to a non-residential or business building, such as a school or city hall. The levee is not such a structure. In addition, even if the levee were considered to be a community structure, CERCLA §104(a)(3)(B) limits responses "from products which are part of the structure, and result in exposure within..." the structure. Here, EPA is not concerned with any release of asbestos "within" the structure, but rather "from" the structure. Thus, the response limit would not apply.

Comment:

22. The City of San Jose stated that, "if the EPA were to select a remedy other than removal, and health and flood/engineering issues were equal, then the most desirable remedy is the one which would provide for an acceptable appearance of the levee, one which meets the aesthetic needs of the Alviso community." In such a case, the City of San Jose stated that "a soil cover, with low maintenance native plants and gunite only where it is necessary, would be preferable, certainly to the plain gunite cover."

EPA Response:

EPA appreciates the City's suggestion of the soil cover, with native plants being preferable to the gunite cover as an alternative.

Comment:

23. The City of San Jose strongly urged that "the views of the Alviso community be taken into account on matters such as desirability of a walking-jogging path, benches, and other amenities, if the safety of the community is assured."

EPA Response:

EPA has taken the views of the community into account, through a series of public meetings, meetings with the Community Advisory Committee, and requests for input in fact sheets, flyers, and public notices. The OUFS did not describe the finished levee cover in detail concerning paths, benches and other amenities. These are details of final design which will be presented at a later date, provided that liability of the levee landowners is not a problem. EPA is aware that the residents would prefer a usable public space if the levee is to remain, and EPA plans to satisfy this concern to the extent possible under the law.

Comment:

24. The City of San Jose stated that a recent file search "revealed the possibility that it may be appropriate to designate additional potentially responsible parties (PRPs). These include the U.S. Department of the Interior, Piazza Construction, Hillsdale Quarry, and W. H. Ebert Construction." Moreover, the City stated that "EPA should investigate more thoroughly the sources of the material that the levee was constructed from and whether those sources contained asbestos in order to accurately identify all Potential Responsible Parties, as required by 42 U.S.C. §9613(k)(2)(D)." Finally, citing Page 1-6, lines 18-19 of the OUFS, the City of San Jose stated that EPA should identify the additional source for the fill, if this is someone other than Raisch. The City further stated that this source should be investigated to ascertain whether it contains asbestos, and that the source should be identified as a PRP, as required by 42 U.S.C. §9613(k)(2)(D).

EPA Response:

Pursuant to CERCLA §113(k)(2)(D), 42 U.S.C. §9613(k)(2)(D), EPA has conducted a diligent search for PRPs and has identified San Jose and Raisch as PRPs for the Alviso Ring Levee. The City suggests, however, that other entities may also be PRPs. EPA has evaluated the City's suggestion and has determined that none of these parties will be considered Alviso Ring Levee PRPs at this time.

Comment:

25. The City of San Jose stated that "any remedial orders should consider both long and short term solutions, and should provide for subsequent alterations, for example to permit work to be undertaken on the ultimate levee."

EPA Response:

CERCLA §121, 42 U.S.C. §9621, requires EPA to evaluate the long term effectiveness of a range of alternatives. EPA has made the required analysis in the OUFS. EPA's remedy will not preclude further action by the City at the levee, provided public health and environmental concerns are met.

Comment:

26. The City of San Jose stated that "any removal and rebuilding which might be permitted should be accomplished between April 15th and October 15th, in view of weather considerations."

EPA Response:

EPA appreciates this comment regarding the best construction season. These considerations will be part of the Remedial Design document.

Comment:

27. The City of San Jose stated that removal of any or all of the levee should not be conducted until "flooding/engineering studies have been conducted, and adequate flood control measures, if required, are taken." The City further stated that "the effects of transportation and disposal should be carefully considered, before any removal is ordered."

EPA Response:

If removal were to be carried out, as described in Section 3.3.3 of the OUFS, removal would be staged so that outgoing loads of contaminated soil would be replaced with incoming fill by the same trucks, if possible. In that scenario, therefore, levee replacement would proceed concurrently with removal, so that flood protection would not be compromised. EPA has considered the effects and the cost of transportation and disposal of the levee, and has screened out off-site disposal as an option unless the PRPs would conduct the removal, disposal, and replacement of the ring levee, as described in the report.

Comment:

28. The City of San Jose stated that the matter of asbestos is complex, and that "data as to asbestos health risks is incomplete, especially as to chrysotile asbestos."

EPA Response:

EPA acknowledges that the matter of asbestos is complex, and for that reason accepts that all forms of asbestos are potentially hazardous, including chrysotile. EPA is taking a conservative approach in their concern for potential, as well as for existing, health risks. Please refer to the response to comment 7.

Comment:

29. The City of San Jose contended that "the comment period allotted to the City, thirty days, plus a two-week extension, was simply too brief to permit the City to fully address matters of the complexity involved in the OUFS. EPA's denial of the City's request for a sixty day extension hindered the City in conducting its review of the OUFS, prevented a study of other alternatives and combinations of alternatives, and in preparing full comments on the OUFS. As a consequence, the City asserts that it has been denied due process of law."

EPA Response:

EPA has complied with all of the requirements of CERCLA Section 113(k)(2)(B) -- "Administrative Record and Participation Procedures" for remedial actions. In addition, EPA has met with and briefed the City of San Jose as often as requested over the past three years. See the response to comment 1.

Comment:

30. The City of San Jose expressed its regret that time limitations constrained their efforts to provide full comments, and stated that the City "would welcome an opportunity to submit further comments."

EPA Response:

The original comment period opened on April 12, 1988, and allowed for a four week public comment period. The final close of the comment period was on May 25, 1988, which provided a total of six weeks for public review and comment. The comment period was twice as long as required by law and afforded all parties adequate review time.

Comment:

31. Citing Page ES-1, lines 3-4 of the OUFS, the City of San Jose indicated that the referenced height of the levee conflicts with other sections of the report. The City indicated that this conflicts with Page 1-12, Section 1.3.2, lines 28-30; and Page 1-6, lines 17-20 of the OUFS.

EPA Response:

Different values for the height of the levee have been inconsistently reported, because the height of the levee is variable depending on location. The reference to levee height should read, "The levee is an average of 6 feet in height, and ranges from 5 to 12 feet in height depending on location."

Comment:

32. Also citing Page ES-1, lines 3-4 of the OUFS, the City of San Jose indicated that the statement that the levee "surrounds most of the community of Alviso..." is inaccurate. Referencing Page 1-12, lines 28-30 of the OUFS, the City stated that "surrounding the town on the east, north, and northwest...does not reasonably imply that 'most of the community' is surrounded."

EPA Response:

Referencing Figure 1-2 of the OUFS, it is apparent that the ring levee is a significant linear feature, approximately 2 miles in length, that is present to the east, north, and northwest borders of Alviso. The statement that the levee "surrounds most of the community" is not misleading when the figures that accompany the text are examined.

Comment:

33. Citing Page ES-1, lines 6-8 of the OUFS, the City of San Jose stated that "portions of the levee were constructed during the flood, not after," and that "accurate placement of the emergency levee, in terms of conforming to existing property lines, was hampered by the flood conditions (parts of the area were under water)."

EPA Response:

EPA acknowledges the City's comment about the timing of levee construction and flood conditions during construction. This information was not available during preparation of the report.

Comment:

34. Also citing Page ES-1, lines 6-8 of the OUFS, the City of San Jose stated that the City "did not then and does not now have primary jurisdiction or responsibility for providing flood protection. Prior to the emergency action, no plans were being developed by the City to construct a levee. The statement that the City and the County were jointly planning to provide flood protection is incorrect. The Santa Clara Valley Water District is the public agency charged with flood control responsibility."

EPA Response:

The OUFS made the statement that the ring levee was constructed "as part of the City's and County's plans to provide improved flood protection based on the Draft Environmental Impact Report of the Alviso Ring Levee prepared by Ruth and Going, November 1983 and October 1984, for the City of San Jose. In the two versions of that document, the statement is made (Page 1, Summary of Impacts) that "The proposed project, the Alviso Ring Levee, would be an earthen dike intended to provide flood protection for the community of Alviso from fresh water and tidal flooding." Also, on Page IV-1 (Project Relationship to Existing Plans and Policies), it is stated that "the proposed Ring Levee would be consistent with the policies of the San Jose General Plan. These references were used to support the general introductory statements on the background of the construction of the existing ring levee.

Comment:

35. Citing Page ES-1, lines 8-10, and Page 1-6, lines 16-19 of the OUFS, the City of San Jose stated that its research indicated that the sources of material used during construction of the levee includes two quarries: the Raisch Quarry and the Hillsdale Quarry. The City stated that "it is not known at this time whether the Hillsdale Quarry materials contained asbestos."

EPA Response:

EPA appreciates the comments regarding the sources of the levee material. This information will be considered by EPA in their research and negotiations with potentially responsible parties.

Comment:

36. Also citing Page ES-1, lines 8-10, and Page 1-6, lines 16-19 of the OUFS, the City of San Jose questioned which quarry is referenced as being in Cupertino.

EPA Response:

The material was provided from an excavation on Homestead Road in Cupertino.

Comment:

37. Citing Page ES-2, lines 6-8 of the OUFS, the City of San Jose questioned "whether the implied elimination of the removal option due to 'high costs' is valid."

EPA Response:

EPA has determined, since the OUFS was finalized, that RCRA regulations do not apply to the South Bay Asbestos site, since asbestos is not a RCRA-defined hazardous waste. Therefore, wastes would not have to be disposed of at a RCRA Subtitle C facility. However, since asbestos _is_ classified as a toxic contaminant by the State of California, disposal would be required at a State approved Class II landfill. This would decrease disposal costs, but hauling fees would remain high, as well as the costs for replacement of the levee. Since an equally effective remedy can be implemented at lower cost, the removal option was screened out.

Comment:

38. Again citing Page ES-2, lines 6-8 of the OUFS, the City of San Jose asserted that locations other than RCRA-approved landfills should be considered for disposal of the material. Specifically, the City stated that "existing EPA policy requiring that naturally occurring asbestos material in soil and rocks be disposed of only in RCRA-approved facilities (when asbestos can be safely disposed of by burial which does not pose any long term threat by migration), should be examined prior to dismissal of the removal option as too costly." The City further stated that "the history of EPA's actions for asbestos abatement includes instances where asbestos material, once safely buried, was excavated and reburied at high cost with no additional increased protection, is often cited as an extreme example of bureaucratic mismanagement."

EPA Response:

As stated in the previous response, a RCRA-approved landfill would not be required for disposal. This will make the disposal option less costly. However, since equally effective remedies are available at lower cost, the disposal option was screened out.

Comment:

39. Citing Page ES-2, lines 15-17 of the OUFS, the City of San Jose stated that "it is not clear what the term 'easements' means here. If it applies to easements needed to apply the gunite versus the soil cap, then the statement may be true. If easements for the placement of the levee are in question, it is

not clear why the gunite option would eliminate any required easement."

EPA Response:

The OUFS, on page ES-2, is referring to the permanent easements required for the cover, that is, the cover (whether soil or gunite) that will extend laterally beyond the base of the existing levee. Since the gunite is several inches thick, as opposed to the soil cover which is 18 inches thick, a smaller permanent easement is required with the gunite cover design. Refer to Figures 4-1 and 4-2 of the OUFS for a graphic representation of the difference in easement requirements.

Comment:

40. Citing Page ES-2, lines 15-17 of the OUFS, the City of San Jose stated that "speculating as to what will be acceptable to the public is not appropriate. They should be consulted and heeded."

EPA Response:

The public has been consulted and heeded throughout the RI/FS process. Several public meetings have been held at which times comments were received from residents. EPA has been in contact throughout the process with the Community Advisory Committee and spokesmen for the community. Furthermore, the OUFS was based on the previous OUFS report prepared by Canonie Engineers for the State, which also underwent a period of review and comment. In addition, the public will have further input during the design phase of the project. For a complete list of the community relations activities conducted by EPA at this site, see Section I of this Responsiveness Summary entitled "Background on Community Involvement and Concerns."

Comment:

41. Citing Page 1-1, lines 15-19 of the OUFS, the City of San Jose stated that, although the language seems to indicate that asbestos found elsewhere came from the levee, and acknowledged that chrysotile asbestos may be present in the rocks and soil in the levee, the OUFS "does not establish that there has been any 'significant' migration of that form of asbestos from the levee."

EPA Response:

The purpose of the OUFS was to examine various remedial options for the levee itself, based on the potential risks to persons in the area of the levee, rather than to establish that migration of asbestos has taken place from the levee.

Comment:

42. The City of San Jose asserted that "the [DHS] tests which may indicate the possibility of migration have not been shown to have been conducted in a matter accepted as scientifically valid."

EPA Response:

The DHS exposure experiments were intended as screening tests to indicate the potential for asbestos exposure. EPA believes that the DHS tests yielded significantly valid results for purposes of screening evaluation. The tests clearly demonstrated that certain common activities could release asbestos fibers to the air. This is stated in the OUFS on Page 4-10.

Comment:

43. In reference to Page 1-1, lines 15-19 of the OUFS, the City of San Jose suggested that the sentence be reworded to state (...appears to be a discrete area where naturally occurring chrysotile asbestos is found in rocks and soil,...), instead of (...appears to be a significant source of asbestos....).

EPA Response:

Thank you for your suggestion for rewording the sentence. However, EPA believes this sentence is most accurate as written, and, therefore, it will not be modified.

Comment:

44. In reference to Page 1-1, lines 15-19 of the OUFS, the City of San Jose also asserted that the "naturally occurring chrysotile asbestos found in the rocks and soil in the levee is no different than the naturally occurring chrysotile asbestos found in rocks and soil in a variety of other locations, including their original (natural) locations." The City further asserted that "if the levee were a fortuitously located geologic formation deposited in its present location by the forces of nature, it would not have been included in the South Bay Asbestos Area. That the levee came into being as a flood control measure, and not as a result of deposition through the course of nature should not make any difference.

There was no 'waste' disposal in the ordinary sense. The levee should not be treated as a waste disposal site."

EPA Response:

EPA is concerned about potential asbestos health risks, regardless of the origin of the material. The fibers from natural versus processed asbestos material have equal carcinogenic potential . The fact that the levee material was excavated from its origin and transported to the site distinguishes it from a natural formation or outcrop. The waste disposal referred to on Page 1-1 of the OUFS relates to the landfilling activity on other parts of the site, not the construction of the ring levee.

Comment:

45. Citing Page 1-2, lines 19-21 of the OUFS, the City of San Jose stated that "the OUFS analysis of the causes of flooding in Alviso is superficial and that additional analysis is required before a remedy is selected." Moreover, the City suggested that "proximity to the Bay and land subsidence..." does not take into consideration "a variety of factors relevant to an evaluation of flooding risks...including but not limited to other flood control devices." Furthermore, the City of San Jose stated that "without an examination which goes beyond 'proximity to the Bay and land subsidence...' the OUFS is deficient and provides an inadequate basis for selection of the suitability, vis-a-vis the flooding potential, of any of the alternatives." Finally, the City asserted that "in the absence of evidence establishing that the remedial action will not increase the risk of flooding, a prudent PRP might be compelled to resist a remedial order, in an effort to insulate itself from liability for flood damage and asbestos contamination which might result from flood water erosion and dispersal of the levee."

EPA Response:

The OUFS did not include a thorough analysis of the flood control potential of the levee, because the control of asbestos being released from the ring levee is the focus of EPA's analysis. While EPA acknowledges that leaving the levee in place rather than removing it allows for the possibility that a very large flood may dislodge portions of the levee and distribute the asbestos throughout the community, EPA believes that the chances of this occurring are relatively remote.

In such an occurrence, EPA would evaluate the damage to the levee and the dispersion of the asbestos throughout the

community and implement the necessary corrective action. Thus, the OUFS is not deficient.

Finally, EPA cannot speculate as to the motivation of a PRP to fail to comply with a CERCLA §106 remedial order.

Comment:

46. Citing Page 1-6, lines 1-2 of the OUFS, the City of San Jose stated that the levee was constructed during, not after, the flood.

EPA Response:

EPA acknowledges the comment that at least portions of the ring levee were constructed during the flood; this information was not available during preparation of the report.

Comment:

47. Citing Page 1-6, lines 6-9 of the OUFS, the City of San Jose stated that "it is the City's position that the flooding emergency simply left no time to consult the various agencies involved. Moreover, applicable regulations contemplate emergency situations, and provide for 'after-the-fact' permitting."

EPA Response:

The wording in the OUFS regarding permit status at the time of levee construction was included to fully describe the history of the levee. EPA acknowledges the City's comment that the construction was an emergency action, and understands that San Jose must obtain an "after-the-fact" permit from the Army Corps of Engineers.

Comment:

48. Citing Page 1-6, lines 8-13 of the OUFS, the City of San Jose asserted that "the City had no plans to construct a levee prior to the 1983 flood. There was no 'tentative flood control plan' prior to the construction of the emergency ring levee and the document cited by EPA postdates the construction activity."

EPA Response:

EPA based its assumption that the City had planned to construct the ring levee on Page II-16 of the Alviso Ring Levee Environmental Impact Report (Ruth and Going, 1984), which

states "as a result of severe flooding in the Winter of 1982-83, and in the late summer of 1983, a temporary levee was constructed to reduce impacts to the Community of Alviso from future flooding." EPA is aware that the quoted document post-dates the construction, but assumes that the construction was part of the plan which prompted the completion of the EIR.

Comment:

49. The City of San Jose asserted that Page 1-6, lines 18-19 of the OUFS conflicts with statements on Page ES-1, lines 8-10.

EPA Response:

The Executive Summary should read "the sources of the material used for the levee appear to be two quarries containing asbestos..." to be consistent with page 1-6.

Comment:

50. Citing Page 1-8, lines 9-12 of the OUFS, the City of San Jose stated that "the OUFS fails to establish either the relevance or validity of the raking and shoveling 'experiment' (not test, not sampling method, but 'experiment'), or that the OSHA permissive exposure limit (for occupational settings) is applicable to environmental naturally occurring chrysotile asbestos when it is not artificially disturbed by raking and shoveling in front of a fan."

EPA Response:

The DHS experiments were screening tests to investigate the potential for risk from inhalation of asbestos. In that sense they are valid indicators of a potential problem. The OSHA permissible exposure limit is based on extensive medical evidence of asbestos exposure (see Federal Register; June 20, 1986, OSHA Rules and Regulations), and was used in the OUFS report as a comparison standard or frame of reference for the reader. EPA believes the OSHA standard is applicable to environmental asbestos sites if the concentration of the asbestos source approaches that of occupational settings, as do the ring levee soils. EPA believes this because the potential risks from asbestos inhalation (i.e., lung cancer, mesothelioma) remains the same regardless of the setting.

Comment:

51. Citing Page 1-10, lines 1-5 of the OUFS, the City of San Jose asserted that the language is both too general and too brief.

Moreover, the City stated that "it is simply not the case that studies show, or permit the reasonable conclusion, that inhalation of any single asbestos fiber, of any size, will invariably produce an extremely adverse human health effect. Indeed, some fibers, notably chrysotile, as a result of their size and susceptibility to acid decomposition, seem to pose a lower risk to adverse health effects." The City further submitted that "not all forms of asbestos have been thoroughly examined 'in numerous epidemiology studies.' There have been numerous studies. These were not uniform, and many did not (were not able to) distinguish one form of asbestos, chrysotile, from others. The quoted language is therefore misleading. The distinctions in the studies of the effects of various forms of asbestos are simply too important to justify indiscreet use of the inaccurate collective term 'asbestos'."

EPA Response:

As stated previously, EPA considers all asbestos forms to be potentially hazardous, and does not distinguish chrysotile as being less hazardous. It is true that many medical studies have attempted to distinguish carcinogenic effects based on fiber type. However, EPA's position is amply supported by many individual and governmental research studies. As stated in 1984 by James Mason, M.D., Ph.D, Assistant Surgeon General of the United States, "these recent studies have shown that chrysotile asbestos is firmly established as a human health hazard." Referenced studies include those by Stanton et. al, which has shown that fibers less than 1.5 microns in diameter and greater than 8 microns in length are carcinogenic in experimental animals regardless of physiochemical properties; Robinson et. al., McDonald, et al., Selikoff, Nicholson et al., Rubino et al., Boutin et al., and Kogan. Each of these reports shows a positive correlation between exposure to chrysotile asbestos and biological disease in humans including asbestosis, lung cancer, and mesothelioma.

Comment:

52. Citing Page 1-12, lines 8-9, 12-14, and 25-26 of the OUFS, the City of San Jose noted that it appreciated EPA's concern for asbestos exposure, but stated that "concern does not mean that a particular action contemplated by EPA is justified." The City further noted that EPA, to date, has not found "a justifiable basis for the promulgation of appropriate standards for naturally occurring asbestos in rocks and soil." The City thus concluded that this is the reason EPA has not promulgated these standards. The City of San Jose further asserted that "acting against the levee on the basis of data that is incomplete -- or worse -- in the face of data indicating that different forms of asbestos pose different risks, and that

chrysotile may well pose the least risk, would be arbitrary and capricious."

EPA Response:

EPA has acted at many Superfund sites where health standards have not been promulgated. According to the National Contingency Plan (40 CFR §300.3), EPA may act to prevent "releases or substantial threats of releases of hazardous substances into the environment...which may present an imminent and substantial danger to public health or welfare." In addition, CERCLA states that EPA is authorized to act to remove or arrange for the removal of and provide for remedial actions relating to hazardous substances whenever EPA deems it necessary to protect the public health, welfare, or the environment, CERCLA §104(a)(1), 42 U.S.C. §9604(a)(1). This is consistent with the NCP. The OUFS presents sufficient data to indicate the potential for exposure to a known human carcinogen, and thus provides adequate support for a remedial action.

Comment:

53. Citing the OUFS supplemental sheet, dated April 28, 1988, the City of San Jose stated "there is no justification for EPA to take action until all unresolved matters have been addressed. To act otherwise would deny the rights of Alvisans and the PRPs to an informed reasonable judgment, and procedural due process." The City based this assertion on the following statement contained in the OUFS supplemental sheet, "levels of ambient airborne asbestos in the community do not appear to differ significantly from other nearby communities."

EPA Response:

EPA does not believe that there are any remaining unresolved matters. The OUFS report is intended to address the potential for exposure and possible risks due to direct disturbance of the soils.

Comment:

54. Citing Page 1-12, lines 28-29, and Page 1-13, line 1 of the OUFS, the City of San Jose questioned the accuracy of the described acreage of the levee (8 acres). The City stated that Appendix C, Page C-1 of the OUFS cites the current area as being 4.2 acres, and cites the required area for the capping alternative as being 4.0 additional acres.

EPA Response:

The figure of 8 acres for the total existing levee is based on measurement of the levee area as presented on maps of the site (Harding Lawson Assoc., 1987), supported by aerial photographs and site verification. The four acres referred to in Appendix C by the U.S. Fish and Wildlife Service refers only to the area of wetland affected by the ring levee, as determined by the Corps of Engineers in a letter to D. Kent Dewell (Director of Public Works of San Jose).

Comment:

55. Citing Page 1-21, lines 24-25 of the OUFS, the City of San Jose asserted that the statement that it appears likely, based on the TEM results, that the ring levee was contributing asbestos to the ambient air in Alviso during windy periods "seems to be an unsupported assumption or opinion." The City continued: "The testing cited does not appear to be designed to differentiate between different sources of asbestos dust. Considering the widespread indiscriminate dumping of asbestos containing wastes that have taken place, the large amount of unpaved dirt roads and commercial areas known to contain asbestos dust, and the lack of control of this source of re-entrained dust generated by both wind and vehicle traffic, it would seem appropriate to assume that other sources, besides the levee, are principal contributors. The City also stated that it is not clear how, based on the TEM results cited, the conclusion stated, 'it appears likely that the ring levee was contributing asbestos', is supported by evidence." The City further noted that evidence refuting EPA's conclusion that "it appears likely that the ring levee was contributing asbestos to the ambient air in Alviso during windy periods" is given on Page 1-21, lines 29-30 of the OUFS: "Results of the PCLM, or optical microscopy, analysis showed opposite results (Table 1-2)."

EPA Response:

The statement was made that the ring levee appeared to be contributing asbestos to the ambient air in Alviso based on the TEM results (Page 1-21). The Woodward-Clyde results show that the TEM data for total asbestos fibers are higher downwind of the levee than upwind. This is true approximately 80 percent of the time, based on the Woodward-Clyde statistical analysis of the data. The PCM data do not show this relationship, since the higher fiber counts were observed upwind of the levee. It is important to note that the number of PCM fibers counted was very low, which calls into question the accuracy of the results (discussed by Woodward-Clyde). That is, the smaller the number of fibers counted, the greater the likelihood that the fibers observed, say 1 or 2 fibers, are caused by blank contamination and are not truly the result of the sampling event.

The acknowledged uncertainty of the Woodward-Clyde data indicates that wind erosion may not be the dominant mechanism of asbestos entrainment. The preliminary data from the RI study appear to indicate that specific mechanical disturbances, rather than wind or weather conditions, are most likely the cause of asbestos release to the air.

Comment:

56. The City of San Jose questioned the results of the upwind/downwind air monitoring. The City specifically cited Page 1-21, lines 24-27 of the OUFS, which states that "the downwind concentrations were less than, or equal to, the concentrations upwind of the dike." Furthermore, the City cited the OUFS supplemental sheet, dated April 28, 1988, which describes the results of additional air monitoring. The supplemental sheet describes the concentration variances between upwind and downwind samples as being "not statistically significant," and indicates that "the experiments are not considered conclusive at this time and the data are being reanalyzed..." The City of San Jose asserted that the OUFS supplemental sheet fails to identify specifically which experiments are inconclusive, which data are being reanalyzed, and why. The City of San Jose stated that "EPA's failure to identify these experiments, or to say why they are not considered conclusive leaves the matter open to speculation and denies commenters the opportunity to present arguments or evidence on this point." The City further stated that "the result [of this process] is a denial of an effective opportunity to comment, a denial of due process."

EPA Response:

The previous response describes Woodward-Clyde's observed differences between upwind/downwind air results for TEM versus PLM, and that, for PLM, the upwind asbestos results were often higher. The Woodward-Clyde report very clearly points out that the air monitoring data, both TEM and PLM, are not statistically conclusive. The OUFS supplemental sheet refers to both the Woodward-Clyde data and the ambient air monitoring performed. Ambient air data also are not statistically conclusive, in that they do not show a clear difference between asbestos concentration upwind of town and within the town itself. It is the CDM air data collected during the RI investigation that are being reanalyzed. Because of the uncertainty in the CDM air data, and the fact that CDM monitored the community as a whole and not the ring levee specifically, these data were not included in the OUFS. The City will have an opportunity to comment on these results when the RI/FS for the overall community is released for public comment in late 1988.

Comment:

57. Referring to Page 2-2, lines 18-20 of the OUFS, the City of San Jose stated that this "seems to highlight the scientific and policy dilemma faced by EPA. A no-threshold exposure value for which there is no danger of cancer from exposure is cited...as the level required for safety. Noting the existence of ambient background levels in the area, the City then asked "how...can an assessment of the efficiency of any proposed remediation method be determined as decreasing risk to an (undefined) 'insignificant' level?" The City finally noted that "only the complete elimination of asbestos from the ambient environment could be considered as a zero threshold or 'insignificant' risk."

EPA Response:

The risk from exposure referred to on page 2-2 of the OUFS is the incremental risk posed by inhalation of asbestos in the levee soils, over and above the ambient background risk which exists not only in Alviso but in most urban areas. EPA's goal is to remediate a specific source to reduce cancer risk to an insignificant amount above the background risk.

Comment:

58. Citing Page 2-2, line 20 of the OUFS, the City of San Jose stated that this "is not a valid worst-case assumption for the simple reason that we know, at least with some statistical certainty, that the highest level observed is not a valid likely mean value. Even a worst-case assumption has to be tempered by some reasonable estimate of the likely percent of asbestos present in the fill. A worst-case assumption does not allow choosing a discrete data that may fit a previously taken assumption or unrecognized bias."

EPA Response:

The statement referred to (Page 2-2, line 20) is simply a statement of the presence of asbestos. The statement "...up to 40 percent..." is clear that this is a maximum value. This value is not used as a worst-case assumption to determine risk.

67

Comment:

59. The City of San Jose, citing Page 2-2, line 20 of the OUFS, suggested that "if this section is to serve some function, [then] the worst-case assumption [should] be based on a concentration based on the mean, not the extreme of the existing data."

EPA Response:

As presented in the previous response, the maximum value of 40 percent asbestos serves only as an illustration of the presence of asbestos in the context of the discussion of asbestos toxicity.

Comment:

60. The City of San Jose questioned the logic of projecting a lifetime exposure and a "predicted level in air" from asbestos concentration data for soil. The City further stated that the OUFS "contains no substantiation for that assumption."

EPA Response:

It is an obvious fact that asbestos fibers in air are released from an asbestos source, whether serpentine rock, serpentine-containing soils, or manufactured products with asbestos fibers. The OUFS contains ample substantiation of this fact in the form of the DHS experiments, which show a release of fibers into air during disturbance of soils containing asbestos. The EPA Region IX Air Guideline quoted on page 2-2 was included only as support for the statements concerning asbestos toxicity. In fact, lifetime exposures were examined using air, and not soil, values, as discussed in Section 4.2 of the OUFS.

Comment:

61. Citing Page 2-4 of the OUFS, under "the description of NESHAP," and the text following the table, the City of San Jose stated that "EPA's description of the NESHAP neglects to mention that there is apparently no prohibition which addresses the use of rocks and soil which contain chrysotile asbestos in its naturally occurring form from being used as fill material for levees, dikes, roadbeds, or any other purpose." The City further stated that "conceptually, it would seem that the rocks and soil in the levee are no different from any other serpentine rocks and soil in their natural setting."

Citing the lack of "regulations or health standards that apply directly to outdoor air asbestos," and asserting that there is "conceptually" no difference between the levee material and other serpentine rocks and soil, the City of San Jose stated that "to order action against the levee, and not other sites where serpentine rocks and soil are found, without stating a rationale for making the distinction, is not justified. The OUFS contains no such rationale."

EPA Response:

EPA's concern and justification for action is based on the proximity of the town's residents to the levee, as opposed to other asbestos situations where people do not live nearby. Also, the levee is no longer a naturally-occurring outcrop or occurrence of asbestos, since it has been quarried, transported and placed in a new location. Thus, §104(a)(1) of CERCLA, 42 U.S.C. §9601(a)(1) provides the authority for EPA to remedy the situation here.

Comment:

62. The City of San Jose, citing Page 2-24, lines 18-21 of the OUFS, which states that regulations require the use of RCRA landfills for possible disposal of the levee material, stated that this "constitutes a basic underlying flaw...in both EPA's approach to the general problem of naturally occurring asbestos and the...OUFS." The City stated that this "represents an illogical interpretation of policy." Noting that EPA classifies asbestos as a carcinogen, the City asserted that "the naturally occurring forms of asbestos found in the soil at the site do not require the stringent criteria and controls needed for final disposal that other hazardous wastes present." Furthermore, noting that many other states would not consider the levee material a hazardous waste, the City asserted that "the appropriate long-term disposal requirement for asbestos-containing soil is burial, and that asbestos-containing soil "does not require specific liners or other controls at the burial site because asbestos is both chemically inert and insoluble in water so that migration is not a problem." The City supported this assertion by noting the "enormous amounts of this material currently safely contained by nature..." The City further stated that "limiting the study to consideration of RCRA landfills is a failure to consider reasonable alternatives." The City stated that "removal and placement of the material in a burial site is an option which must be evaluated if the study is to be complete." Without endorsing any specific option, the City suggested that using the levee material as fill for a freeway construction project should be considered "especially...if EPA flooding/engineering studies suggest that one of the cover alternatives would pose a risk of future flood damage." Finally, the City of San Jose stated that, in addition to non-RCRA landfills and freeway fill, "a

non-landfill burial site which will provide a final resting place for the material, such as a quarry, should also be considered."

EPA Response:

As stated in a previous response, EPA has determined that placement of the levee in a RCRA-approved landfill, _if_ off-site disposal is chosen, is not necessary. However, a California certified Class II landfill would be required as a disposal site, since asbestos is classified as a toxic contaminant by the State California Administrative Code, Title 22, Section 66680(c). The requirements of Class II disposal, as promulgated under California law, would apply to the levee. Any disposal site other than a Class II landfill, such as a quarry or construction site, would not be feasible under the State law, absent a waiver.

Comment:

63. The City of San Jose stated that "the fact that the EPA has to discard what may be the safest and best _long-term_ solution, removal and burial, because EPA's administrative requirements are inflexible, has extreme implications for this project." The City asserted that EPA must give consideration to disposing asbestos-containing soil in non-RCRA landfills. Moreover, the City stated that it "submits that disposal in a RCRA landfill is not required" under 40 CFR §300.65, and that Class II or Class III landfills should be considered for disposal of the levee material. Finally, the City stated that "the fact that asbestos-containing soils are routinely being excavated and used within this region and throughout the state, without similar controls or concern only confounds public perception of this issue."

EPA Response:

Please refer to the previous response, which addresses appropriate disposal locations.

Comment:

64. Referring to Page 3-15, lines 20-22 of the OUFS, the City of San Jose asserted that the statement "seems to be an unsupported assumption." In support of this assertion, the City stated that appropriate mitigation measures for dust generation from excavation "are routinely used," and that "the excavation and transport of material should not present a health threat."

EPA Response:

The alternative for off-site disposal has the greatest potential for risk to residents due to extensive excavation, loading, and hauling activities. However, if this alternative were implemented, every available and appropriate measure would be taken to minimize these risks. Dust mitigation measures were not detailed in the OUFS, since they will be part of the actual design phase of the project.

Comment:

65. In reference to the potential removal of the levee, the City of San Jose stated that "serpentine rocks and soil are routinely excavated and hauled..." Furthermore, the City stated that "no restrictions or controls have been set by EPA which covers those operations," and that "if controls are needed, they should be promulgated." Finally, the City stated that "the inference to be drawn from the failure to promulgate such regulations is that none are needed."

EPA Response:

Refer to the response to comment 61. EPA and the State of California are studying the statewide asbestos problem. Regulations to deal with the statewide asbestos problem are being evaluated at this time.

Comment:

66. Citing Page 3-17, lines 17-19 of the OUFS, and the removal costs cited in the Containment Alternatives Summary Table on Page 3-18, the City of San Jose noted an apparent inconsistency between the text and the data in the table. The text states that the removal option ($7,969,900) is seven times more expensive than "similar options" ($1,380,600 to $2,950,400), and the City stated that this is "an obvious error in mathematical calculation." Referring to this apparent inconsistency, the City stated that this "raises the question as to what other errors in calculation, perhaps less obvious, are within the body of this study and have formed the basis for some of the calculations and recommendations contained in the document."

EPA Response:

Page 3-17 of the OUFS states that the "...capital costs [emphasis added] are seven times more [for the off-site landfill option] than similar alternatives." If the capital costs in Table 3-1 are compared, it is obvious that the off-site landfill is between 5 to 7 times higher than the Soil Cover and Gunite Cover alternatives. No mathematical error is present.

Comment:

67. Citing Page 3-20, lines 17-19 of the OUFS, the City of San Jose stated that "there is no evidence known to the City to suggest that 'this fixation product' is present in the operable unit under discussion, i.e., the Ring Levee. To the City's knowledge, the only form of asbestos in the levee is naturally occurring chrysotile asbestos found in its natural condition in the rocks and soil in the levee." The City stated that "unfortunately, the quoted language illustrates shortcomings in the OUFS; the failure to differentiate between types of asbestos, and the failure to attempt to identify the source or origin of the asbestos being discussed." Moreover, the City of San Jose noted that the levee is a "discrete, identifiable portion of the site," and stated that "the failure to specifically identify 'asbestos' and its source, renders this portion of the OUFS misleading."

EPA Response:

The OUFS must be consistent with the remedial options being considered for the remainder of the South Bay Asbestos site. Since fixation products, i.e., cement/asbestos pipe, are present in other parts of the site, it would be difficult to justify fixation for the ring levee when fixation products are an asbestos source elsewhere in Alviso. Regardless of the origin of the asbestos, whether manufactured or naturally-occurring in soils, the fibers potentially liberated to the air pose the same risk, in EPA's opinion, to residents in Alviso. EPA is aware that cement/asbestos pipe or fixation products are not present in the levee.

Comment:

68. Citing Page 3-27, lines 32-34 of the OUFS, the City of San Jose stated that the cost estimate "seems to be totally unsupported." The City further stated that "an estimate range of cost is first cited, then ignored for no apparent reason and with no explanation. Based on the information provided, the estimated range of costs for the Plasma Fusion alternative would be $20,436,960 to $95,372,480."

EPA Response:

The statement on page 3-27 has been misinterpreted. The second sentence, under the heading "Cost" states: "Estimates of total

72

project costs [emphasis added]... range from $300 to $1,400 per cubic yard..." The next sentence then begins, "Based on a treatment cost [emphasis added] of $125 per cubic yard..." The costs estimated in the OUFS are based on $125 per cubic yard for treatment, plus costs for mobilization, capital equipment, levee removal, hauling, treatment, disposal, reconstruction, restoration, and demobilization, for a total project cost of $283 per cubic yard (top of page 3-28). This compares closely with the low end of the range referenced by the University of Minnesota on page 3-27.

Comment:

69. The City of San Jose stated that no authority is cited for Page 4-5, lines 3-5 of the OUFS: "filling activities to provide buildable land have claimed the majority of the Bay marshes over the last 100 years." The City further asserted that the statement may not be justified. The City suggested that 80% of the "lost wetlands" have been converted to "salt ponds or similar uses," and "only 11% have been converted to industrial uses." Moreover, the City stated its belief that "the San Francisco International Airport, Oakland International and the U.S. Naval Air Station, Alameda, account for nearly all of the 11%."

EPA Response:

Reference for the statement that the majority of the Bay wetlands have been lost to filling comes from Page II-1 of the Alviso Ring Levee Environmental Impact Report (Ruth and Going, 1984), prepared for the City of San Jose. EPA included the statement to reinforce U.S. Fish and Wildlife Service and Army Corps of Engineers concern about wetlands losses. Research into the exact disposition of lost wetlands throughout the Bay is outside the scope of this Responsiveness Summary.

Comment:

70. The City of San Jose asserted that violations identified on Page 4-5, lines 3-5 of the OUFS are inappropriate. The City suggested that "in the absence of notice and a hearing, followed by an adjudication, it is premature for the Agency to state flatly, without qualification, that 'violations have occurred.'" The City further stated that "in order to preserve its defenses, and to avoid any adverse inferences which might be drawn from failure to comment, the City of San Jose, on its own behalf, and on behalf of its present and former officers, employees and agents, specifically denies any and all 'violations' referred to in the OUFS, expressly or by implication."

EPA Response:

EPA acknowledges this comment. However, EPA understands that San Jose has not obtained the appropriate Army Corps of Engineers "after the fact" permit for construction of the ring levee, nor has San Jose implemented mitigation for the loss of wetlands and endangered species habitat since levee construction in 1983.

Comment:

71. Referring to the U.S. Fish and Wildlife Service calculations for lost wetland acreage given on Page 4-6, lines 5-7 of the OUFS, the City of San Jose stated "for the record, and to preserve its objections, the City disagrees with the USF&W calculations." The City submitted that the calculations "are without demonstrated justification in law or fact."

EPA Response:

The U.S. Fish and Wildlife Service submitted a Draft Habitat Evaluation Procedure (HEP) calculation to identify for the City of San Jose and EPA what possible acreage could be required for mitigation. These calculations were intended only for discussion purposes. The U.S. Fish and Wildlife Service has not provided a final acreage calculation to date.

Comment:

72. Citing Page 4-8, lines 7-10 and 32-34 of the OUFS, the City of San Jose submitted that "the 'toy truck' experiment has not been demonstrated to be a valid method and that it has not been shown to have any scientific validity. The City disagrees that the 'toy truck' experiment has been shown to be a 'plausible worst case.'"

EPA Response:

The toy truck experiment was selected as the "plausible worst case" because it was an attempt by the State to demonstrate the risk to a child playing in the dirt, without the use of a fan to blow the dirt. EPA acknowledges that the DHS experiments do not have valid quality control/quality assurance checks, such as blanks or duplicate samples. However, the plausible worst case risk calculation results in a very wide range of risks (depending on how "risk fibers" or fibers greater than 5 microns are determined) which serves to indicate the potential for risk.

Comment:

73. Referring to Page 4-8, lines 32-34 of the OUFS, the City of San Jose stated that "the OUFS contains no evidence to support [the] assumption" that a child would play on the levee for 5 hours every day for 6 days of each week of the summer months. The City thus suggested that "the exposure assumption has not been shown to have a valid basis," and stated that "the exposure assumptions should be redone."

EPA Response:

The assumptions used for the exposure scenario are, in EPA's opinion, reasonable, and are supported by photographed observations of children playing at the site. Guidelines for estimating exposure to children in such a situation are presented in EPA's Superfund Public Health Evaluation Manual (EPA, 1986b) and Final Guidelines for Carcinogenic Risk Assessment (Federal Register, 1986b). EPA followed these guidelines in estimating exposure here.

Comment:

74. Citing Page 4-14, line 2 of the OUFS ("No Action would not be acceptable to the community given the emergency remedial work performed to date and the information EPA has provided on the dangers of asbestos."), the City of San Jose asserted that the statement "seems to be unsupported opinion." The City continued: "The community has questioned, at the recent public meeting, why EPA has taken no action regarding the obvious sources of dust, the community streets and truck yards, but is [sic] seemed apparent that they had little knowledge regarding the 'remedial work performed to date' (assuming this is a reference to the polymer spraying)."

EPA Response:

EPA based the statements regarding community acceptance on the input and comments gathered from residents throughout the project. Because of the work performed to date at the site, and the health warnings that EPA has issued since 1985, EPA is convinced that the residents would not accept No Action. The fact that comments were raised at the Public Meeting (held April 28, 1988) about EPA's lack of response regarding the truck yards and the streets indicates the public expectations of action at the site. A fact sheet announcing that the ring levee would be sprayed with polymer to prevent dust migration was distributed in June 1987.

Comment:

75. Citing Page 4-14, lines 10-11 of the OUFS, the City of San Jose stated that "the unidentified 'local agencies' and the nature of their 'expressed concerns' should be identified in the OUFS, and opportunity to address their concerns should be permitted. Failure to identify them, and to permit comment, denies procedural due process to the PRPs."

EPA Response:

The local agencies referred to on page 4-14 and throughout the report include the California Department of Health Services, Santa Clara County Public Health Department, the Santa Clara Valley Water District, and the Bay Area Air Quality Management District. Records of communication between these agencies and EPA or the State Department of Health Services are included in the Administrative Record for review.

Comment:

76. The City of San Jose stated that it is "most concerned that the opinions of the community be considered." Furthermore, citing Page 4-19, line 14 of the OUFS, which refers to community acceptance of the soil cover, the City stated that "documentation of public meetings in which such opinions were expressed should be provided."

EPA Response:

EPA is likewise very concerned that the community's input and concerns be addressed regarding any remedial actions. EPA has conducted a series of public meetings, and has distributed information using flyers and fact sheets throughout the project. For a complete listing of community relations activities conducted by EPA to date, see Section I of this Responsiveness Summary, "Background on Community Involvement and Concerns."

Comment:

77. The City of San Jose asserted that the statement regarding asbestos concentrations in Alviso given on Page B-19, lines 34-37 of the OUFS should be considered with the statement in the April 28, 1988 OUFS supplemental sheet that "the levels of ambient airborne asbestos in the community at present do not appear to differ significantly from other nearby communities." The City further asserted that "these statements suggest that selection of a 'remedy' before full evaluation of necessity and

appropriateness of the remedy has been evaluated would be premature."

EPA Response:

The remedy has been fully evaluated in accordance with the guidance regulations in 40 CFR §300.68, and the current EPA guidance as cited on page 2-1 of the OUFS. The statements on page B-19 of the OUFS were not made by EPA, but rather by DHS in 1985. The OUFS supplemental sheet is the more current reference, and reflects the recent RI/FS air monitoring data which show no conclusive statistical difference between upwind and downwind air stations. However, since EPA believes that the greatest risk of asbestos exposure is through mechanical disturbance of soils, this ambient air data does not directly impact this remedy selection process.

Comment:

78. The City of San Jose asserted that Page 1-2, line 13 of the OUFS "demonstrates, in EPA's own language, that 'major uncertainties' continue to exist with respect to health criteria for exposure to asbestos via inhalation." Referring to these uncertainties, and language in the OUFS supplemental sheet, the City further suggested that it is inappropriate to select a permanent remedy until "the 'major uncertainties' are resolved." The City stated that it "urges the EPA to take prompt action to resolve the 'major uncertainties' and to make its selection, once the 'major uncertainties' are resolved."

EPA Response:

The "major uncertainties" statement referred to on page 1-2 of the Toxicity Profile for Asbestos, presented in Appendix B, must be viewed in the context of the report. The uncertainties are associated with the development of health criteria. There is no uncertainty that asbestos inhalation causes adverse health effects. Principally, asbestos health experts are divided on the issue of what size of fiber causes the greatest risk. Various medical studies differ in their reporting of fiber sizes, size distributions, fiber types, and so on. The uncertainty faced by the medical community is what criteria are most relevant to health effects. For example, should total fibers inhaled be the primary indication of risk? Are fibers longer than 5 microns more hazardous than short fibers? What is the best way to convert occupational setting fiber measurements to calculate (typically lower) ambient air risks? These uncertainties are operational problems that do not change the central fact of the carcinogenic potential of asbestos.

Comment:

79. Citing Page 2-1, line 32, and Page 2-2, lines 1-2 of the OUFS, regarding the health effects of asbestos, the City of San Jose stated that "the language illustrates the need to closely examine the sweeping generalizations currently extant regarding asbestos. The statement that 'asbestosis is primarily involved in occupationally exposed individuals following long-term exposure to high levels of asbestos' would seem to be more to the point." The City further asserted that "the Alviso Ring Levee does not involve a risk of long-term occupational exposure to high levels of asbestos, and must be evaluated differently."

EPA Response:

The statement on page 2-1 and 2-2 of the Toxicity Profile for Asbestos in Appendix B has been misinterpreted. What is stated in Appendix B is that asbestosis (fibrosis of the lung tissue) is primarily caused by long-term occupational exposure to high asbestos levels. Asbestosis is a non-cancerous disease which is not a factor in the general population. Therefore, it was not discussed further in the Profile.

Comment:

80. The City of San Jose cited Page 3-5, line 7 of the OUFS: ...fine chrysotile fibers were not studied because they could not be measured..." Referring to this statement, the City asserted that "the...language illustrates the points that not all 'asbestos' studies are studies of the same fibers, and that results of a given study are not necessarily applicable to all forms of asbestos, particularly chrysotile asbestos." The City thus submitted that "the health effects and exposure assumptions in the OUFS should be reevaluated, using studies specific to chrysotile."

EPA Response:

The focus of the studies referred to in Appendix B of the OUFS, the Toxicity Profile, is investigation of why and how asbestos fibers cause diseases of the lung. It is true that the various medical studies of asbestos disease have not always measured the same things, such as number of small fibers, or the aspect ratio of the fiber (length to width), or asbestos type. But, as addressed in a previous comment and elsewhere in this Responsiveness Summary (see the response to comment 7), high rates of lung cancer have been related to all types of asbestos, including chrysotile.

Comment:

81. Citing Page 3-6, lines 13, 18-19, and 22-25 of the OUFS, which refer to health risks between different asbestos fiber types, the City of San Jose stated the following: "It is submitted that chrysotile's fiber size and degradation character, especially in nonoccupational settings are significant factors which merit closer attention." Moreover, San Jose asserted that the OUFS fails to make the distinction between human health effects related to high and low ambient airborne levels of chrysotile asbestos.

EPA Response:

It is true that there are many more studies on the effects of asbestos, including chrysotile, on workers than on non-occupationally exposed individuals. However, EPA calculates risk for a carcinogen by assuming that there is no "safe" level or "threshold value", that is, that any exposure to a carcinogen, no matter how small, could potentially cause cancer. Thus the cancer rates in high exposure, worker populations are extrapolated to estimate much lower cancer rates in the lower-exposure general population. This is explained in greater detail in EPA's Superfund Public Health Evaluation Manual (EPA 540/1-86-060). This process of predicting risk from lower rates of exposure by extrapolating risk from higher rates of exposure is implied in the discussion on page 3-6 of the OUFS.

Comment:

82. Referring to Page 3-7, lines 1-6 and lines 16-17 of the OUFS, the City of San Jose asserted that "to impose expensive requirements which purport to solve a problem allegedly created by a naturally occurring substance found in rocks and soil in its natural state in widespread areas, before the 'considerable controversy' is resolved, and the differential risks are understood, is to act on the basis of insufficient information. In this setting, remedial orders would be arbitrary and capricious."

EPA Response:

As stated in the response to comment 78, there is no question that inhalation of asbestos fibers causes cancer in humans. Thus, EPA has taken the position that all asbestos fiber types should be considered hazardous to be protective of human health. CERCLA states that response actions may be undertaken if EPA has reason to believe that illness or disease may be attributable to exposure to a hazardous substance (CERCLA §104(B)(1), 42 U.S.C. §9604(B)(1)). Since asbestos fibers are

79

being released into the atmosphere from the levee, EPA may act, consistent with the NCP, to remedy the situation.

Comment:

83. Citing Page 4-1, lines 5-8, lines 23-28, and lines 29-30, and Page 4-2, lines 1-2 of the OUFS, relating to asbestos health risks, the City of San Jose stated that the language "illustrates the limitations of the data available." Noting these uncertainties, and citing the statement in the OUFS supplemental sheet that the Alviso concentrations "do not differ significantly from other nearby communities," the City asserted that "to order remedial action before the OUFS contains data adequate to justify the remedial action contemplated would be to act on 'inconclusive or equivocal' data. Given these limitations, and the limited, inconclusive, equivocal information presented in the OUFS, a decision based on the OUFS would be arbitrary and capricious."

EPA Response:

In response to the cited references, the language clearly states that inhalation exposure to asbestos has been established as a cancer risk; the "uncertainty" mentioned is the carcinogenicity of ingested asbestos [emphasis added]. Pursuant to CERCLA §104, any remedial action can be undertaken at the site if the threat [emphasis added] of a release is present; the OUFS has established the threat of an asbestos release.

Comment:

84. The City of San Jose cited Page 4-2, line 1 of the OUFS as additional evidence "that the nonoccupational studies are 'inconclusive and equivocal.'" The City asserted that "selection of a permanent remedy should be based on conclusive, unequivocal studies," and suggested that the selection process include such studies.

EPA Response:

As stated on page 4-2 of the Toxicity Profile for Asbestos, the studies of non-occupational asbestos exposure are inconclusive; no definitive or unequivocal studies exist to incorporate into the OUFS. However, based on the fact that the same hazardous substance (asbestos) is present here, and that occupational studies have demonstrated without question that asbestos is a human carcinogen, EPA believes that at least a potential risk exists in Alviso from the ring levee. CERCLA §104, U.S.C. §9604, provides that EPA may respond to potential, as well as

80

proven, risks to public health, welfare, or the environment. EPA is proceeding conservatively to protect the public health, by assuming that the evidence for worker exposure and asbestos disease also applies to ambient situations, although at lower rates.

Comment:

85. The City of San Jose cited Page 4-7, lines 24-25 of the OUFS as additional evidence of varying risks for different asbestos types, and noted that "chrysotile seems to be associated with the lowest risks."

EPA Response:

The City has misinterpreted the citation on page 4-7 of the Toxicity Profile. The discussion on page 4-7 is related to gastrointestinal cancers from asbestos. The statement is made that amphiboles may pose a greater risk than chrysotile for mesothelioma of the peritoneum (lining of the abdomen). The next sentence then states "No clear risk differences [emphasis added] related to fiber type has been demonstrated for lung cancer.

Comment:

86. Citing Page 4-8, lines 5-7 and lines 24-25 of the OUFS, the City of San Jose stated that "the comment as to the vulnerability of chrysotile (to dissolve in acid, to split into smaller fibers, or to dissolve in the lung) indicates that the risks of chrysotile exposure may well be lower than for other forms of asbestos." Moreover, the City asserted that "the 'limited' information as to the occurrence of asbestos-related diseases among persons not directly exposed at the work place' suggests that additional information should be obtained as soon as possible. As soon as it becomes available, but not before, EPA should select a remedy, based on that information."

EPA Response:

In order to answer the uncertainties regarding the differences in fiber type and disease response, a very expensive and lengthy epidemiological study would be required involving extensive biopsy studies of lung tissue from asbestos disease victims. That type of original research involving many years of study is not feasible as a requirement for remedial action. EPA may, under CERCLA §104, select remedial action based on the threat of a release of a known carcinogen.

Comment:

87. Citing Page 6-6, lines 11-12 and lines 17-18 of the OUFS, the City of San Jose again asserted that "it appears that the generalized statements in the OUFS as to the risks posed by asbestos may not apply to the risk posed by the naturally occurring chrysotile asbestos in the levee. There is a differential, and it should be taken into account that a policy which fails to consider the differences in the risks is deficient. For that reason, the OUFS is inadequate, as this differential has not been addressed."

EPA Response:

As stated in previous responses, EPA regards all forms of asbestos as hazardous substances under CERCLA. See 40 CFR §302.4. Even if some "differential" may exist, it is undisputable that chrysotile asbestos is a known human carcinogen. EPA has considered the unique facts of asbestos in the levee and has concluded that it poses a potential risk to human health, welfare, and the environment. The potential differential, therefore, has been taken into account.

Comment:

88. Citing Page 7-1, lines 8-13 and 19-20 of the OUFS, the City of San Jose stated that "the blanket indictment of asbestos is not completely justified. EPA should attempt to conduct studies evaluating the individual asbestos materials. Only when this is done can the OUFS serve as a basis for rational decision."

EPA Response:

Please see the responses to the previous two comments regarding evaluation of the effects of asbestos type.

Comment:

89. Citing Page C-1, lines 13-18 of the OUFS, the City of San Jose suggested that "the specific statutory basis, and all relevant implementing regulations, should be presented as a cornerstone of the [U.S. Fish and Wildlife Service mitigation] policy," if the policy is to be observed. The City further asserted that "a reference to 'policy' without providing specific authority as the basis of the policy, is an inadequate foundation for exactions. Citation to 'policy' without citing authority, requires commenters to engage in speculations as to the basis for the 'policy,' and denies them the opportunity to effectively challenge the policy."

82

EPA Response:

The U.S. Fish and Wildlife Service mitigation policy referred to on page C-1 of Appendix C was cited in Chapter 2 of the OUFS in Table 2-1 under Federal ARARs on page 2-16. The mitigation policy is contained in Federal Register Volume 46, No. 15, pages 7644-7663, and establishes mitigation goals to avoid critical habitat loss. In addition, mitigation is discussed in the Endangered Species Act (16 U.S.C. §1531, 50 CFR §200) and The National Environmental Policy Act (42 U.S.C. §§4332-4370), as discussed in the letter to EPA from the U.S. Fish and Wildlife Service included in Appendix C. The actual draft mitigation plan contained in Appendix C was prepared in accordance with U.S. Fish and Wildlife Service, Division of Ecological Services, guidance document ESM 102 entitled "Habitat Evaluation Procedures" (HEP).

Comment:

90. Citing Page C-1, lines 13-18 of the OUFS, the City of San Jose stated that "to the extent that the creation of new wetlands is contemplated as a remedial requirement, the U.S. Fish and Wildlife Service should be required to present evidence that 'conversion-into-wetlands' projects are effective, and that the uplands loss is justified." The City asserts that the OUFS fails to address these points, and that it is deficient until is does.

EPA Response:

Pursuant to CERCLA §121, 42 U.S.C. §9621, EPA is required to take into account all applicable, relevant, and appropriate regulatory requirements (ARARs) in selecting a remedy for each Superfund site. The wetlands requirements are ARARs. CERCLA does not require the U.S. Fish and Wildlife Service to "present evidence" of effectiveness or a discussion of the "justification" of the wetlands conversion. Thus, the OUFS is not deficient. Please refer to the response to comment 89.

Comment:

91. Citing Page C-1, lines 13-18 of the OUFS, the City of San Jose stated that the 8 acres of "lost wetlands" cited conflicts with an Army Corps of Engineers estimate of 4.2 acres lost by construction of the levee.

EPA Response:

The statement on Page C-1 of Appendix C of the OUFS that "wetlands must be identified to offset the loss of approximately 8 acres of land to the levee" should read: "to

offset the loss of approximately 4.2 acres of wetlands to the original levee, and 1.5 acres of wetlands due to the proposed cover alternatives" [discussed in Appendix F of the OUFS].

84

III(C) COMMENTS MADE BY GOVERNMENT AGENCIES:

Comments Submitted by Federal Agencies:

Comment:

92. The U.S. Fish and Wildlife Service expressed concern about the statements in the OUFS regarding the future of the unauthorized fill and the failure of this effort to provide mitigation to offset wetland losses incurred by placement of the unauthorized fill placed in 1983 for the clean-up efforts.

EPA Response:

EPA feels that the best remedial option for the levee is placement of a cover to prevent asbestos exposure, rather than removal of the levee. The future of the levee and the engineered cover will be determined by the City of San Jose, who will be responsible for long-term maintenance after completion of the cover. EPA is currently negotiating with the U.S. Fish and Wildlife Service and the City of San Jose to designate lands for mitigation, to offset the loss of wetlands due to the unauthorized fill, as described on page C-1 of Appendix C. Since specific land areas have not been identified for mitigation, the costs involved could not be discussed in detail in the OUFS.

Comment:

93. The U.S. Fish and Wildlife Service expressed concern about the use of draft technical information pertaining to mitigation, which was provided earlier by the Service for the temporary solution (i.e., emergency soil capping) proposed by EPA.

EPA Response:

The draft Technical Mitigation Plan prepared by the U.S. Fish and Wildlife Service was included in Appendix C for completeness, to demonstrate how wetlands mitigation goals are established using the Habitat Evaluation Procedures. EPA is aware that the plan is a draft and will be reevaluated after the final remedy is selected.

Comment:

94. The U.S. Fish and Wildlife Service, referring to the discussion in the OUFS of the off-site containment alternative (Page 3-15), stated that the sentence "(a) after the levee is removed and replaced, the levee would have restricted use" implies that replacement of the unauthorized levee is a foregone conclusion.

85

The commenters stated that this was not so and stressed that the asbestos clean-up program does not take the place of the public interest review process required in the Army Corps of Engineers regulatory program.

EPA Response:

EPA acknowledges this comment. Replacement of the levee is subject to other government processes.

Comment:

95. The U.S. Fish and Wildlife Service, referring to the statement on Page 4-5 of the OUFS that the Service's mitigation goal for wetlands is no net loss of in-kind habitat values, stated that this was incorrect. The Service's goal is no net loss of in-kind wetland acreage or value.

EPA Response:

EPA appreciates this clarification of the statement regarding wetlands mitigation goals.

Comment:

96. The U.S. Fish and Wildlife Service recommended removal of the unauthorized fill and restoration of wetland values of the area covered by the fill. In addition, the Service recommended that mitigation be provided to offset the interim loss of wetland values for the period the unauthorized fill was in place. The Service further recommended removal of the material and restoration of wetland values and the provision of mitigation for the loss of wildlife values that has occurred to date.

EPA Response:

EPA thanks the Service for its opinion as to the best remedial alternative. EPA is cognizant of the mitigation goals proposed by the Service, and is working to reach agreement with the City of San Jose so that those goals can be met.

Comment:

97. The U.S. Fish and Wildlife Service maintained that it was necessary for EPA to initiate consultation under the auspices of Section 7 of the Endangered Species Act.

EPA Response:

EPA is prepared to initiate consultation under Section 7 of the Endangered Species Act and has been in contact with the Service's Endangered Species liaison. EPA believes that CERCLA §121(e) provides an exemption from "Section 7 consultation" at this site. However, EPA will comply with the substantive requirements of the Endangered Species Act.

Comments Submitted by State of California Agencies:

Comment:

98. The Resources Agency of California asked that they be given an opportunity to comment on any landfilling remedy that is not presently one of the proposed alternatives, if there is a possibility that such a remedy might be implemented.

EPA Response:

EPA does not anticipate that an off-site disposal or landfilling option will be selected, due to high cost and potential risk to residents. However, the Resources Agency would have the opportunity to comment again if the preferred alternative would be changed to off-site landfilling, since a new comment period would be opened.

Comment:

99. The California Department of Fish and Game (the Department) stated that it was the Department's policy that no project should result in a net loss of either wetland acreage or wetland habitat value and stressed that the chosen remedy should incorporate measures to offset the loss of wetlands from both the initial placement of the interim levee and from any loss of wetlands that result from the corrective action. They also stated that compensation should be provided for the loss of habitat values incurred since the interim levee was constructed.

EPA Response:

EPA is actively pursuing an agreement with the City of San Jose and the U.S. Fish and Wildlife Service that will result in mitigation for the levee and the remedial cover. EPA recognizes the importance of mitigating the lost wetland area and habitat values resulting from the filling activities.

Comment:

100. The California Department of Fish and Game, referring to the asbestos-contaminated nature of the dike and the fact that it was constructed without benefit of an Army Corps of Engineers' permit or any other public review process, recommended removal of the dike and restoration of the impacted site to pre-project conditions. Furthermore, they suggested that compensation for the temporary loss of wetland habitat values that has occurred since the dike was constructed be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

EPA Response:

EPA acknowledges the preferred alternative suggestion from the Department of Fish and Game and notes that EPA is working with the U.S. Fish and Wildlife Service to create an acceptable mitigation scheme. EPA welcomes California Department of Fish and Game's input into this process.

Comment:

101. The California Department of Fish and Game stated that if the City of Alviso and/or the County of Santa Clara elects to construct a dike composed of nontoxic material, such a project should be subject to the same public review criteria as any other similar project pursuant to the requirements of the California Environmental Quality Act, the National Environmental Policy Act, and the Army Corps of Engineers Section 404 permit program.

EPA Response:

EPA acknowledges that other regulatory processes apply to replacement of the ring levee.

Comment:

102. The Regional Water Quality Control Board (RWQCB) stated that since this project (corrective action on the levee) will result in a loss of wetland value, mitigation will be required under the Regional Board's Basin Plan.

EPA Response:

EPA welcomes the input of the RWQCB in formulating an acceptable mitigation scheme.

Comment:

103. The RWQCB noted that Section 404 of the Clean Water Act requires a permit from the Army Corps of Engineers prior to the discharge of fill material to waters of the United States. They also stated that under Section 401 of the Clean Water Act, the RWQCB must certify that Section 404 permits issued by the Corps comply with water quality standards established by the State of California.

EPA Response:

CERCLA §121(e), U.S.C. §9621, provides an exemption from permitting processes on Superfund sites; however, EPA welcomes the RWQCB's input into the remedy process.

Comment:

104. The RWQCB questioned the impacts this project would have on the water quality in the New Chicago Marsh and asked that they be allowed to review management plans for this area.

EPA Response:

EPA believes that the ring levee remediation will not affect the water quality in the New Chicago Marsh. EPA will allow the RWQCB to review management plans for the area.

Comment:

105. The California Department of Health Services transmitted a list of Applicable or Relevant and Appropriate Requirements (ARARs) for the South Bay Asbestos Superfund Site to EPA on January 27, 1988. In this transmittal, the Department identified the California Environmental Quality Act (CEQA) as an ARAR for the site. In listing CEQA, the State commented that, "The RI/FS will meet the applicable provisions and will be functionally equivalent under Sec. 21080.5, so that a separate EIR may not be required."

EPA Response:

EPA has determined that the requirements of CEQA are no more stringent than the requirements for environmental review under CERCLA, as amended by SARA, and thus, CEQA is not an ARAR for this site. Pursuant to the provisions of CERCLA, the NCP, and other Federal requirements, EPA's prescribed procedures for evaluation of environmental impacts, selecting a remedial action with feasible mitigation measures, and providing for public review, are designed to ensure that the proposed action provides for the short-term and long-term protection of the environment and public health and hence perform the same function as and are substantially parallel to the State's requirements under CEQA.

EPA will continue to cooperate with the California Department of Health Services and other State and Federal agencies during the design phase, to clarify further environmental review and mitigation requirements for this project and ensure that they are fulfilled.

III(D) COMMENTS MADE BY OTHER INTERESTED PARTIES:

Comment:

106. Two community members felt that much discussion and little effort was being put forth to clean up the site, and they worried that the funding available would be spent on studies, meetings, and analysis instead of rectifying the problem. Specifically, it was mentioned that five years of consistent test results and expressions of preference by the community should be sufficient to demonstrate the correct course of action. The commenters urged EPA to remove the contamination and replace the levee immediately.

EPA Response:

CERCLA requires studies to document the problem and, if necessary, implementation of remedial action after the studies are complete. EPA is acting as quickly as possible under the constraints of the law.

Comment:

107. Two community members noted that, as frustration levels in the community have increased, attendance at the community meetings and reiteration of community preferences has decreased.

EPA Response:

EPA recognizes the level of frustration within the community, and feels much of the same frustration caused by the requirements of the Superfund system. EPA appreciates your input, your efforts to stay involved, and your attendance at this meeting.

Comment:

108. Two community members, referring to Alternative 1 (the No Action alternative), stated that this was an unacceptable option, because it does not solve the proven health risk problem. They also asked that the present "inaction [at the site] be cured."

EPA Response:

EPA agrees that the No Action alternative does not solve the potential health risk and is therefore not acceptable. EPA is moving forward as quickly as possible to cover the levee; that is the reason that the OUFS was prepared, as an effort to achieve faster action on the levee.

Comment:

109. Two community members, referring to Alternative 3 (the Gunite Cover alternative) in the OUFS, stated that this option is not advantageous for three reasons: (1) asbestos fibers would still be present, because leakage and cover deterioration would allow asbestos to escape from under the cover, which would exacerbate structural weakness and lead to further leakage, (2) the "ring wall" would attract graffiti, be unsightly, and decrease property values, and (3) the lack of vegetative cover would present problems for wildlife.

EPA Response:

EPA appreciates the comments regarding the gunite cover. The commenter has identified the reasons why the gunite cover was not selected as the preferred alternative by EPA.

Comment:

110. Two community members, referring to Alternative 4 (the Soil/Gunite Cover alternative), stated that while this option is preferable to a gunite cover alone (Alternative 3), it presented the same disadvantages (see above comment) in the gunited areas. They stressed that this was made worse by the placement of the gunite areas in the most visible areas of the community, thus making this an unacceptable alternative.

EPA Response:

EPA appreciates these comments about the soil-gunite cover alternative. It is true that areas of gunite would present the problems identified in the previous comment. EPA has carefully considered the advantages of a soil-gunite cover (primarily ease of application) versus those for a soil (only) cover, and has rejected the soil-gunite cover in favor of the soil cover.

Comment:

111. Two community members, referring to Alternative 2 (the Soil Cover alternative), stated that if the soil cover were designed, installed, and planted correctly, and there was no wear, this option would be an improvement over the existing ring levee. However, the commenters questioned these assumptions.

92

EPA Response:

The comments regarding the soil cover as an improvement over the existing levee are appreciated. It is anticipated that the cover design will be implemented properly, and that the City of San Jose will maintain the cover through periodic inspection, repair, and upkeep. EPA encourages the community to let the City know the concerns about long-term maintenance.

Comment:

112. Two community members stated that, while Alternative 5 (the Removal and Replacement alternative) was the original option requested by the community five years ago, it was not proposed at that time due to the risk of exposure to dust during removal. The commenters said that they now feel the exposure problem related to short-term risk is no longer relevant (after years of low level exposure), and they would now support this option.

EPA Response:

EPA believes that the principal risk to residents is not exposure to the levee as it is weathered by wind and rain, but rather exposure during direct mechanical disturbance. For this reason, as well as high cost, EPA has not recommended the removal and replacement option as the preferred alternative. However, the input is appreciated and was carefully considered in selecting a remedy for the levee.

Comment:

113. Two community members, referring to Alternative 5 (the Removal and Replacement alternative), stated that this would be the preferable option if the new ring levee could be constructed within the easements and outside of the Wildlife Refuge, if it would have the same aesthetic and environmental standards as the soil-cover option, and if it was not taller than required for basic flood protection.

EPA Response:

If removal and replacement of the levee were selected as the remediation, the replacement levee would be constructed in the same area and at the same height as the existing dike.

Comment:

114. Two community members, referring to Alternative 5 (the Removal and Replacement alternative), noted that this alternative was presented by the community and not by EPA, as was stated in the OUFS. They also stated that this option was absent from EPA's discussion at the April 28, 1988 community meeting.

EPA Response:

As discussed in the OUFS, the removal and replacement option was not carried through to the detailed screening and analysis phase (Chapter 4), because of the risk during implementation and high cost. EPA did describe this option in the April 28, 1988 meeting as a PRP-identified alternative.

Comment:

115. One community member asked who had the final authority over the asbestos problem in Alviso.

EPA Response:

EPA has the final authority to select a remedy for the asbestos contamination in the South Bay site.

Comment:

116. One community member asked who would be held accountable for past, present, and future impacts to the community and to private property including, realty values, construction, restraints to property, and removal of hazardous waste from private property.

EPA Response:

EPA has no legal authority to determine who is liable for property value impacts. In the final remedy for the South Bay Asbestos area, EPA will address any human health and environmental impacts that are caused by the existence of hazardous substances and the remedy. Ultimately, EPA and private property owners must look to responsible parties, as defined under CERCLA for accountability.

Comment:

117. One community member asked what "long range obligations" EPA and the City of San Jose had to the community and to private property owners.

EPA Response:

EPA is obligated by Federal law to re-evaluate Superfund sites, like Alviso, where hazardous substances remain on site, every 5 years. EPA cannot answer the question on behalf of the City of San Jose.

Comment:

118. One community member, referring to Page 1-2 in the OUFS report, stated that notable flood water dates should have included the 1982 Alviso flood from Coyote Creek to the storm drains.

EPA Response:

EPA appreciates the comment regarding the 1982 flood; this information was not included in the OUFS due to an oversight.

Comment:

119. One community member, referring to the "fair market value(s)" on Page 4-2 and 4-3 of the OUFS, stated that the figures were incorrect with regard to land prices and suggested that they did not represent market conditions in the area.

EPA Response:

The values for land reported in the OUFS were based on assessed values reported by the Santa Clara County Assessor's Office, and on information obtained on two recent real estate transactions from a confidential source. Based on the real estate transactions for improved industrial property, or $7.00 to $7.25 per square foot, it was assumed that typical property values would be three times the assessed value. It was beyond the scope of the OUFS to retain a realtor to investigate property prices. The exact location of the easements needed, the property owners, and cost will be determined during the final design phase, using a surveying and title company.

Comment:

120. One community member stated that it was the general opinion of the community that more attention has been given to fish and wildlife than to humans.

93

EPA Response:

EPA does not agree that more attention is given to fish and wildlife than to the human residents at the site. EPA's foremost function is to protect human health; it must also protect the environment from long-term damage. EPA has taken some important steps to protect Alviso residents, by spraying the levee with polymer, removing asbestos-laden dirt, and paving parking lots and streets. Long-term solutions such as the levee remedy take longer to implement because of the need to investigate their long-term effectiveness and to carefully select the remedy that is most appropriate under the law.

Comment:

121. One community member, referring to the source of the asbestos, asked what the position of EPA and the City of San Jose was concerning mitigating the open pit operations at those sites.

EPA Response:

EPA is aware of the quarry which supplied the material to build the ring levee. However, because the quarry is not part of the Superfund site (does not fall within the boundaries), no action is being taken there under CERCLA. The owner of the quarry, however, is negotiating with EPA to determine the extent of payment for the soil cover.

Comment:

122. One community member asked who initially discovered and reported the asbestos content in the dirt.

EPA Response:

The California Department of Health Services (DHS) was the first to find asbestos in the ring levee, and based on that finding, initiated investigations at Alviso. Waste asbestos product (pipe debris) was initially discovered in 1983 at Liberty and Moffat Streets at the Guadalupe River levee during construction by a Cal-OSHA inspector. The large amounts there prompted DHS to sample in other areas of town, including the ring levee.

Comment:

123. One community member asked why the City of San Jose instructed a trucking company to haul dirt from a pit that was known to

have asbestos-laden dirt when pits closer to Alviso have clean dirt.

EPA Response:

It is not known why the City of San Jose selected the Raisch quarry as the source of fill dirt. There is some evidence that part of the ring levee may have come from a quarry or excavation along Homestead Road, but this has not been confirmed.

Comment:

124. One community member asked why the City of San Jose would allow an asbestos laden pit to remain open.

EPA Response:

The City of San Jose may have no direct jurisdiction over the operation of the Raisch quarry, and regulatory agencies have not yet found a violation of law at the quarry.

Comment:

125. One community member questioned why the media reported that Alviso was one of the most toxic sites in California, due to the asbestos-laden levee, when it would appear that the pit where the levee dirt came from would be more toxic because it is worked daily by heavy equipment causing constant airborne releases.

EPA Response:

The media reported the decision by DHS to list the site on the State Superfund list, because of the State's concern that the people living very near the levee and using the levee were potentially at risk. The quarry, however, operates in an industrial area with a much lesser chance for human exposure.

Comment:

126. One community member asked why the City of San Jose had not removed the dirt when they initially discovered it was laden with asbestos.

EPA Response:

EPA can not answer this question on behalf of the City of San Jose.

Comment:

127. One community member asked why money was being spent on project managers and community relations coordinators instead of on education for illiterates who may be using the levee but are unaware of the dangers.

EPA Response:

EPA is attempting to inform everyone who may come in contact with the levee about the levee's dangers, as required by CERCLA. EPA staff costs are minor compared to the cost of the investigation and possible remedial action.

Comment:

128. One community member asked whether asbestos is present in much of the dirt in the [Santa Clara] Valley and on the [San Francisco] Peninsula.

EPA Response:

EPA does not know at this time.

Comment:

129. One community member asked whether trucks were hauling asbestos-laden dirt from a future freeway site in San Jose, without tarps, to the pit that provided dirt for the Alviso ring levee.

EPA Response:

EPA does not know that this time.

Comment:

130. One community member stated that the "community meetings and newsletters seem like some kind of a smoke screen to cover up what is really going on."

EPA Response:

Community meetings and newsletters are not a "smoke screen." They are EPA's procedures, as set out in the NCP, for keeping a community informed about what is going on, and for getting the communities input into the contamination study and remedy selection process.

Comment:

131. One community member asked if the easements obtained during initial levee construction are still in effect for clean-up activities. The commenter also wondered why these easements are so expensive.

EPA Response:

The City of San Jose obtained the construction easements for the ring levee. San Jose has not yet told EPA whether the easements are still effective. The price of an easement is set by the property owner and fair market value.

Comment:

132. One community member asked if EPA would have the authority to enter the levee if it needed an emergency repair or if there was another major flood, and if so, whether EPA could enter the levee to secure "environmental protection" now that there is a known health problem at this site.

EPA Response:

EPA has the authority, pursuant to CERCLA, to repair the levee if a release or threatened release of hazardous substances were to re-occur.

Comment:

133. One community member, referring to a statement that EPA has no authority or power to do anything by itself, wondered if he brought home a Uranium 222 fuel rod, would the EPA have it removed.

EPA Response:

EPA does have the authority to clean up releases or threatened releases of hazardous substances to the environment, pursuant to CERCLA, without the assistance of local or state agencies. If you brought home uranium, EPA would have the power to remove it if EPA determined that the situation would constitute an actual or threatened release of a hazardous substance.

Comment:

134. One community member asked that medical studies be done in the area and asked to whom this request should be directed.

EPA Response:

Medical studies would be conducted, if necessary, by the State Department of Health Services or the Santa Clara County Health Department. Those agencies should be contacted about performing such studies.

Comment:

135. One community member asked if there was evidence of any other problems in this area.

EPA Response:

EPA's site studies have not uncovered any other problems on site, such as hazardous or toxic wastes. The Alviso Oil Company has been contacted by EPA to investigate possible operating violations, including leaks. There is also the possibility that underground fuel tanks, if present in the community, could present a problem if leaks were to occur. However, this is true of any urban area, and investigation of fuel storage facilities was outside the scope of the asbestos study.

Comment:

136. One community member, referring to the dust control problem from the trucking lots, asked if oil would be preferable to water as a dust control measure.

EPA Response:

Oil would not be an acceptable method of dust control, since the components in oil are toxic to humans and the environment. The oil could eventually migrate through the truck lots and contaminate the marsh area.

Comment:

137. One community member, referring to the dust control problem from the trucking lots, asked if it was possible to legally require truck yards to pave their lots.

EPA Response:

It is possible to require the truck lot owners to pave their lots under CERCLA regulation. EPA is currently investigating available methods to have the lots paved.

Comment:

138. One community member asked that EPA contact the owner of the land park and the person who owns property directly in front of the Summerset Mobile Home Park to gain access to their property to test for asbestos.

EPA Response:

Several soil samples were collected in Summerset Mobile Home Park and analyzed for asbestos. Of approximately eighteen samples collected, ten contained no detectable asbestos, six contained 1 to 2 percent asbestos, one contained 3 percent asbestos, and one had greater than 10 percent asbestos. EPA believes that the trailer park area has been sampled sufficiently to show very limited asbestos contamination. The area between Gold Street and the trailer park is owned by the State of California, and access for sampling was not granted, since a fee was required for access which EPA did not pay. During actual site clean-up for the overall site, several samples will be collected in previously unsampled areas to determine the necessity for clean-up.

Comment:

139. One community member, referring to the yellow asbestos warning flags in the front driveway at the Summerset Mobile Home Park, asked when they were put there and what was being tested.

EPA Response:

EPA has no direct knowledge of the yellow flagging in front of the trailer park, but assumes that it was placed there by the Santa Clara Valley Water District during the raising of the Gold Street Bridge.

Comment:

140. One community member asked what erosion problems might EPA foresee if soil cover was the chosen alternative.

EPA Response:

Soil erosion is a potential problem for uncovered soil slopes. EPA would establish a vegetable cover using native, erosion-resistant plant species to inhibit erosion. A sprinkler system would be installed to ensure that the vegetation could become well-established.

Comment:

141. One community member wondered whether soil cover had been used elsewhere in a similar situation.

EPA Response:

Soil cover is a common solution to contamination problems requiring control other than excavation. Soil is commonly installed over solid waste landfills when the landfill is no longer in use.

Comment:

142. One community member asked why the clean-up is taking so long. The commenter also asked why the soil was still being tested when the OUFS states that a "numeric risk characterization is not necessary for EPA to proceed with clean-up actions at this site."

EPA Response:

The soil samples that have been collected were part of the overall RI/FS and not part of the Operable Unit. EPA acknowledges that the clean-up is taking a long time, but the Agency is doing everything as quickly as possible under the constraints of the law.

Comment:

143. One community member asked how bad was the asbestos situation.

EPA Response:

The RI/FS will address the entire asbestos situation and will be released for review and comment in October, 1988.

Comment:

144. One community member, who supports the EPA levee asbestos removal project, urged that this go forward expeditiously, and added that, in his opinion procrastination has, thus far, hindered resolving the problem.

EPA Response:

EPA acknowledges this comment.

Comment:

145. One community member asked that the asbestos clean-up effort include "making the levee less obtrusive and hideous".

EPA Response:

EPA intends to design a cover for the asbestos materials that has the least effect possible on the community.

Comment:

146. One community member asked that the asbestos-contaminated fill be removed and replaced by clean fill in order to form a new levee.

EPA Response:

Please see the response to comment 112.

Comment:

147. One community member asked that the "new levee" be landscaped with trees and other greenery, with scenic walking trails, rest areas, and proper paving and drainage in order to prevent mud run-off during the rainy season. This commenter believes that these improvements will screen the obtrusion of the levees and provide an opportunity for Alviso and other South Bay residents to enjoy the unique characteristics of the community.

EPA Response:

EPA's powers under CERCLA allow it to eliminate or mitigate releases and threatened releases of hazardous substances into the environment. The Raisch Company and the City of San Jose, as PRPs, should be contacted for further action regarding the aesthetics of the area.

III(E) COMMENTS MADE AT THE APRIL 28, 1988 PUBLIC MEETING

The comments and the bracketed responses, below, are consistent with the discussions from the April 28, 1988 public meeting. However, some aspects of remedial activities at the site have changed since April 28, 1988. For example, EPA's preferred alternative is no longer the soil/gunite cover (as reflected in discussions during the meeting); the preferred alternative is now the soil (only) cover. Furthermore, EPA no longer considers a RCRA Class C landfill necessary for disposal of the levee (if the Removal and Disposal alternative is eventually chosen). Therefore, additional responses were added to augment the original responses and/or to clarify EPA's position. These additions are the unbracketed EPA responses provided below.

Comment:

148. One community member questioned whether the five clean-up alternatives were the choice of EPA or of the community.

EPA Response:

[The five clean-up alternatives, presented in the Engineering Evaluation/Cost Analysis, were chosen by EPA because they were found to be protective of public health and the environment, technically feasible, and cost-effective. The purpose of the public comment period, including the public meeting, is to give community members the opportunity to comment on these clean-up alternatives. Ultimately, EPA selects a remedial alternative based on several criteria, including community acceptance.]

Comment:

149. One community member stated that the $24,000 value placed on a home in Alviso in EPA's study was inaccurate.

EPA Response:

The property values reported in Appendix F of the OUFS were based on readily accessible records at the Santa Clara County Assessor's office. A more complete title search and property appraisal will be performed during the design phase of the project.

Comment:

150. One community member asked who is responsible for the asbestos in portions of the ring levee that are on private property.

EPA Response:

[EPA is responsible for controlling asbestos on the ring levee, including portions that are privately owned.] However, the final responsibility for asbestos remediation rests with the owner of the ring levee and the owner(s) of the property on which the levee is located.

Comment:

151. One community member asserted that asbestos contributes to the devaluation of property value and questioned who should be accountable for the devaluation.

EPA Response:

[EPA will control the asbestos in those portions of the ring levee which are on private property.] EPA is not responsible for devaluation of private property. This is an issue that must be decided by the court.

Comment:

152. One community member asked, in the event that EPA seals the asbestos on private property, whether or not he could: (a) break the seal; and (b) if so, would he be held liable for asbestos which became airborne as a result.

EPA Response:

[Property owners would be held responsible, if, after breaking the seal, asbestos became airborne.]

Comment:

153. One commenter stated that EPA had entered his property without his permission. The commenter added that it was the general opinion of the community in Alviso that EPA should remove the ring levee, because the community is not responsible for having placed the asbestos there.

EPA Response:

EPA attempted to obtain either written or verbal permission from all property owners prior to conducting activities during the RI/FS investigations. Documentation of these attempts can be found in the Administrative Record for this site.

[While EPA acknowledges that the property owners did not place the asbestos in the ring levee, property owners who have portions of the ring levee on their property (and for which EPA will be seeking easements) are responsible for the asbestos on their property. They may not, however, be the only responsible party.]

Comment:

154. One commenter, who has hauled truckloads of soil out of the Raisch Quarry (from which the material used in the Alviso ring levee was drawn) to areas throughout the Santa Clara Valley, questioned why EPA was focusing on Alviso and not on other communities as well.

EPA Response:

[EPA is aware of the asbestos in Alviso, but not elsewhere.] Under the Superfund program, Alviso is located within the boundaries of a specific study area, and remedial activities are authorized only within those formal boundaries because of concern for the health of Alviso residents. EPA is currently investigating other areas of asbestos in the region, and is working toward developing regulations for control of the use of asbestos-bearing rock.

Comment:

155. This commenter (see comment 154) offered to show EPA where the asbestos can be found in other parts of the Valley.

EPA Response:

This comment is acknowledged.

Comment:

156. One community member asked if EPA would expand the site location if it had a map of where the other soils from the Raisch quarry had been disposed.

EPA Response:

[EPA would ask the State, City, or County to investigate the sites where soil from the Raisch Quarry was disposed and assess whether EPA involvement was necessary.]

Comment:

157. One community member asked for a verbal description of the location of the quarry.

EPA Response:

[The Raisch Quarry is off Old Monterey Road, near the fairgrounds, and part of Communication Hill.] After the meeting, EPA sent this person a map depicting the location.

Comment:

158. One community member asked how the gunite cover would increase the flood control function and erosion resistance to the levee when it would only be two inches higher than the soil cover.

EPA Response:

[The gunite cover would not resist a flood that was of a higher elevation than the existing ring levee, however, the gunite material is more resistant to erosion.]

Comment:

159. One community member asked what type of water flow EPA anticipated coming in across the flatlands of lower Santa Clara Valley.

EPA Response:

[EPA would anticipate a sheet flow or a tidal flow but not a river. There are points on the ring levee (the corners or bends) which are more susceptible to erosion and these points would need to be reinforced with gunite as opposed to soil. For example, during the 1983 flood, the water depth was probably higher than the ring levee, and if gunite had been in place, it may have prevented erosion or washing as the water rose and washed over the levee.] However, EPA's preferred alternative is the soil (only) cover, and EPA expects this cover to be sufficiently resistant to erosion. It must be stressed, however, that EPA's responsibility is the remediation of asbestos, not flood control.

Comment:

160. One community member commented that if water washes over the levee, erosion damage would be irrelevant. The commenter also wondered where the gunite would be installed, and added that

the gunite was not much of an improvement over soil. This commenter felt that most people would vote for soil cover instead of the gunite/soil combination, because it would only result in a $7,000 savings.

EPA Response:

[EPA would like to use soil for as much of the cover as it could, however, there are constraints with certain portions of the ring levee that make it difficult to use a soil cover. In some areas large earth movers would have difficulty gaining access and gunite may have to be used in these areas, although public comment could change this.]

Comment:

161. One community member, referring to the places on the map that may have gunite covers, stated that there is plenty of room to work there. The commenter also stated that the flood waters in 1983 were lower than the walls of the ring levee and, had it been in place, the ring levee would have provided sufficient protection. The commenter felt that hydrology in the area should be closely studied, because flood waters might contain an energy source so strong that gunite would not prove effective.

EPA Response:

EPA has reconsidered the use of gunite, and now feels that a 100 percent soil cover would be more advantageous. Although the issue of flood control is important, EPA's responsibility is the remediation of asbestos, not flood control.

Comment:

162. One community member asked whether part of the Raisch quarry is now a mobile home court, and if so, why action has not been undertaken there.

EPA Response:

[EPA will check into this issue.] There are mobile home parks in the area and one adjacent to the quarry. However, there is no mobile home park on the Raisch quarry.

Comment:

163. One community member asked why it was taking so long for EPA to complete the ring levee.

EPA Response:

[The Federal Superfund process mandates that EPA follow specific requirements. These requirements, often cumbersome and time-consuming, were designed to ensure that the right decision is made for all persons affected by a Superfund site. These requirements include preparation of studies and analyses, coordination with other agencies, and public comment periods.]

Comment:

164. One community member asked why the asbestos could not simply be dug up and taken away.

EPA Response:

[The cost of digging the asbestos up and having it disposed of in a commercial hazardous waste landfill would be approximately $9 to $10 million. This cost is prohibitively expensive.] Although a certified RCRA hazardous waste landfill is no longer considered necessary for this alternative, there are equally effective remedies, such as the soil cover, which are less expensive to implement. Therefore, removal and disposal was screened out as an option for EPA. However, EPA may allow the PRPs to remove the levee if they agree to do it at their cost and in accordance with an EPA approved plan.

Comment:

165. One community member stated that Alviso did not have any problems with floods before the ring levee was built.

EPA Response:

[The record in Alviso shows that flooding has occurred since 1777.]

Comment:

166. Various community members questioned when floods had occurred in the past and from where these flood waters originated.

EPA Response:

[The specific years that the town of Alviso was flooded is beyond the scope of this project. EPA is not trying to rebuild the levee to alleviate potential flooding, it is concerned with eliminating or reducing the risk of asbestos exposure, part of which is the result of the asbestos that is contained in the material in the ring levee.]

Comment:

167. One community member asked if medical studies had been done in this area.

EPA Response:

[To EPA's knowledge, no medical studies, relating to asbestos, have been undertaken in the Alviso area.]

Comment:

168. Many community members questioned what EPA had done to date regarding asbestos dust from the truck yards. Many commenters added that this problem directly affects the community on a daily basis and should be taken care of promptly.

EPA Response:

[EPA collected samples from the various truck yards along State Street. However, these samples had to be re-analyzed twice, because asbestos is very difficult to measure accurately in soil. Last month when the asbestos contamination was positively identified, letters were sent out to all of the truck yard owners specifying the asbestos concentrations in the soil and suggesting that they water down their yards periodically. This is the next area targeted for action in Alviso.]

Comment:

169. One community member asked if there was something the community could do to help control the asbestos dust in the air.

EPA Response:

[Community residents along State Street could hose down the dust outside of their homes.]

Comment:

170. One community member, referring to residents along State Street being asked to hose down the dust outside of their houses, replied that there is presently a water shortage.

EPA Response:

EPA acknowledges this comment and urges water conservation at this time.

Comment:

171. One community member stated that holding the dust down should not be a big problem.

EPA Response:

EPA is considering dust suppression techniques for the roads.

Comment:

172. One community member asked that EPA do something about the dust problem while keeping the community informed of the situation.

EPA Response:

See the response to comment 171. EPA will keep the community informed.

Comment:

173. One community member stated that if the asbestos dust problem in the truck yards were serious, EPA could do something to alleviate the situation, including supplying water to the truck yards.

EPA Response:

EPA is planning action at the truck yards.

Comment:

174. One community member asked if soil samples had been taken from the truck yards and from nearby homes.

EPA Response:

[Samples have been taken from these truck yards and homes.]

Comment:

175. One community member asked if the dust blowing off the ring levee is the source of the asbestos contamination.

EPA Response:

[The dust blowing off the ring levee is part of the asbestos contamination problem.]

Comment:

176. One community member asked if water were used to keep the dust down and it subsequently washed down the drain, wouldn't the asbestos inhalation problem be eliminated. The commenter also asked if EPA had the funds to water down the asbestos dust and stressed the need to control immediately the asbestos dust, because it is the source of the inhaled asbestos contamination.

EPA Response:

[The assumptions that asbestos dust is the source of the inhaled asbestos contamination, and that the asbestos inhalation problem could be eliminated if the asbestos were watered and washed down the drain, are correct. However, if this occurred, the asbestos would turn up elsewhere and could cause a potential health risk.]

NOTE:

In regard to the many questions raised about dust control in the community, it is important to note that airborne dust not containing hazardous substances is not regulated under CERCLA. It is the potential for asbestos in the dust that is of concern. Under the Superfund process, EPA must demonstrate that the asbestos in dust is a potential health risk, then determine the best means for control. If the airborne asbestos poses a risk above background, then EPA can take action to control the problem. The risk from airborne asbestos is currently being determined in the RI/FS study which will be released later in 1988. Public comment is encouraged on the RI/FS, once it is released.

Comment:

177. One community member, referring to the fact that EPA stopped the City of San Jose from street sweeping because of the amount of dust it was generating, asked how this risk compares to the

risk posed by trucks and cars driving up and down the street, or leaving the dust on the street.

EPA Response:

[The exposure from the dust generated by cars and trucks is equally as dangerous as that generated by the street sweepers. It is also dangerous to leave the dust sitting on the street. Short term remedies for dealing with this problem are still being investigated.] EPA has verbally recommended a wet-vacuum process to the San Jose Neighborhood Maintenance Division.

Comment:

178. One community member asked if it is worse to leave the dust on the streets and to allow cars to generate the asbestos dust, or to have the street sweepers generate the asbestos dust.

EPA Response:

[EPA originally believed that the majority of the asbestos that was in the road along State Street, Spreckles Avenue, and Grand Boulevard was being washed off the ring levee and onto the streets. However, dust carried by trucks onto the streets may pose significant risks as well. At this time the best short term solution appears to be keeping the street sweepers out until the levee can be covered permanently.]

Comment:

179. One community member asked if the street sweepers could now return.

EPA Response:

[The risks and benefits associated with the return of the street sweepers will have to be studied before a decision is made to allow the street sweepers back into the area.] EPA will recommend to the San Jose Neighborhood Maintenance Division that they use a self-contained recirculating air sweeper to clean the streets. Several local contractors, such as Celtics Sweepers, own such sweeper trucks. The truck uses a water spray and does not exhaust the air, to control asbestos emissions to the air.

Comment:

180. One community member asked if watering the truck yards would be more of a hazard than the dust, because mud would be

transported and re-distributed on the wheels of buses and trucks.

EPA Response:

Problems such as this could occur. EPA recommends paving the truck yards.

Comment:

181. One community member asked what the definition and role of EPA is in the context of the asbestos dust problem.

EPA Response:

Although an EPA representative stated at the community meeting that EPA "might not have authority to exercise control over asbestos dust within the town of Alviso," CERCLA gives EPA authority to act when there is a release or a threatened release of a hazardous substance (CERCLA §104, 42 U.S.C. §9604).

Comment:

182. One community member asked if all dust (regardless of whether it contains asbestos) in the air is hazardous to ones health.

EPA Response:

[All dust may be hazardous. However, Superfund must work within certain constraints, and these constraints do not allow dealing with dust that does not contain hazardous substances.]

Comment:

183. One community member asked if EPA's presence in the community implies that they will be responsible for some type of clean-up action.

EPA Response:

[When the study is finished, it will be decided if clean-up action by EPA is warranted in the area with respect to asbestos.]

Comment:

184. One community member stated that community members should have input into the study. The commenter also asked what progress had been made at the site since EPA became involved.

EPA Response:

Since late 1985, [when EPA became involved in the site, the ring levee was sealed, the study was finalized, the extended part of Spreckles Avenue was paved, the lot behind George Mayne School was paved, and the Environmental Education Center was paved.]

Comment:

185. Two community members asked for an explanation as to the purpose of community meetings.

EPA Response:

[The purpose of community meetings is to keep interested community members informed of site activities, and to find out what the community concerns are. In addition, formal comment periods provide a forum for EPA to receive comments. (Community meetings are held during these formal comment periods.)]

Comment:

186. One community member asked if EPA is concerned about the community's health, and if so what about the blowing dust problem.

EPA Response:

[EPA is concerned with the health of the community. Unfortunately, the Federal laws in question do not give EPA the authority to deal with dust in and of itself. However, the City of San Jose and the County of Santa Clara have the authority to pass local ordinances to control dust. The community could petition the City of San Jose to pass an ordinance to restrict the amount of dust on the truck yards, regardless of the asbestos levels.]

Comment:

187. One community member asked what authority EPA had to stop the street sweeping.

EPA Response:

[EPA provided the City of San Jose with the data collected and asked that street sweeping be stopped.]

Comment:

188. One community member commented that the City of San Jose probably complied with this request because it did not cost any money, not because of the health implications.

EPA Response:

[The net result was that the street sweeping was stopped, because it was believed that this would be beneficial to the people in Alviso.]

Comment:

189. One community member asked if the asbestos in the dust was the initial concern that led to cessation of the street sweeping. The commenter also asked if the study results have indicated that the asbestos contamination in the street dust warrants action to keep it down.

EPA Response:

[This determination can only be made after long-term study results are examined. These results should be completed in September. At that time it will be determined if the contamination in total (i.e., street dust in combination with other asbestos sources around town) warrants taking further action (other than what is presently being proposed on the ring levee).]

Comment:

190. One community member asked if the community would continue to breathe dust in the interim months before the study results are completed.

EPA Response:

[Until the study results are completed, EPA cannot initiate overall remedial action at the site to correct the asbestos problem.]

Comment:

191. One community member asked if there was a way to "wet sweep" the asbestos dust. The commenter also questioned if the asbestos dust truly created a hazardous material concern, since this fact had not yet been concluded.

EPA Response:

EPA is considering various dust control technologies. EPA believes that the asbestos dust creates a potential threat to human health.

Comment:

192. One community member asked what liability might be faced if the City of San Jose were asked to reinstate street sweeping in the affected areas.

EPA Response:

[The incremental liability cannot be determined at this time.]

Comment:

193. One community member, referring to the above response, asked if this also meant that nothing would be done on the ring levee until the September study comes out.

EPA Response:

[Funds are in place for an interim remedy at the ring levee. The primary purpose of this community meeting is to solicit comments on the proposed interim remedies on the ring levee which will be in effect until an overall solution is developed.]

Comment:

194. One community member stated that, while EPA's efforts were appreciated, many community members were frustrated due to the lack of accountability and participation by the City of San Jose. This commenter encouraged EPA to beautify (rather than to use gunite) the ring levee, as it is already an environmentally sensitive area. The commenter also asked what environmental impacts were associated with polymers.

EPA Response:

[EPA thanks this commenter for expressing his appreciation of EPA's efforts at this site and adds that the polymers which were selected for the ring levee are non-toxic.] Due to public comments and input from other agencies, gunite will not be a part of the remedial design.

Comment:

195. One community member, referring to the ring levee, asked if gunite covered with earth was one of the proposed remedies.

EPA Response:

[Gunite with earth on top was not one of the proposed remedies. Previously, a fabric liner over the existing ring levee with soil on top was considered. However, the study showed that a larger soil cover was a better solution to the problem than putting a fabric cap on with little soil cover.]

Comment:

196. One community member asked if there was a synthetic fabric with a long lifetime that could be put on the ring levee.

EPA Response:

[There are synthetic fabrics that would last a long time. However, it would be difficult to assure that the soil would adhere to them.]

Comment:

197. One community member stated that the [Santa Clara Valley] Water District uses fabric or soil stability and erosion control where extreme hydraulic problems exist, and added that the water flow is vertical and not horizontal like stream flow.

EPA Response:

[A synthetic cover could be used if EPA could be assured that the community would not use the levee. However, the community has requested that they be allowed public access to the levee for hiking, walking pets, etc. For this and other reasons explained in the OUFS, EPA feels that the best remedy will be a much larger soil cover.]

APPENDIX A

Written Comments Submitted During the Public Comment Period and the Question and Answer Period of the April 28, 1988 Public Meeting

Index of Submitted Comments

1. Comments Submitted by The Raisch Company (Letter from Keith Howard, Tinning & DeLap, Attorneys at Law, dated May 24, 1988)
2. Comments Submitted by the City of San Jose (Letter from Michelle Yesney, Director, Office of Environmental Management, dated May 25, 1988)
3. Comments Submitted by State and Federal Government Agencies
    - Comments Submitted by the U.S. Fish and Wildlife Service (Letter from James J. McKevitt, Field Supervisor, dated May 10, 1988)
    - Comments Submitted by the Resources Agency of California (Letter from Gordon F. Snow, Assistant Secretary for Resources, dated May 25, 1988)
    - Comments Submitted by the California Department of Fish and Game (Letter from Pete Bontadelli, Director, dated May 25, 1988)
    - Comments Submitted by the Regional Water Quality Control Board (Letter from Steven G. Eberl, Water Resource Control Engineer, dated May 13, 1988)
4. Comments Submitted by Other Interested Parties
    - Comments Submitted by Craig Parada and Sharon Rice, Alviso Residents (Letter dated May 25, 1988)
    - Comments Submitted by Robert W. Gross, The Mudflat Refuge (Letter dated April 28, 1988)
    - Comments Submitted by Brenda Monroe, Alviso Resident (Letter dated May 2, 1988)
    - Comments Submitted by Diane K. Hein, Alviso Resident (Letter dated May 4, 1988)
    - Comments Submitted by Roy Jimenez, Family Health Foundation of Alviso, Inc. (Letter dated May 25, 1988)
5. Question and Answer Period of the April 28, 1988 Public Meeting (Pages 30 through 66 of the Meeting Transcript)

Comments Submitted by

The Raisch Company

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OTHER OFFICES
RICHMOND, CALIFORNIA

May 24, 1988

HAND DELIVERED 5/25/88

Nancy Woo
Remedial Project Manager
U.S. Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

Dear Ms. Woo:

This letter, together with its attachments, constitutes the comments of The Raisch Company to the Operable Unit Feasibility Study (OUFS), South Bay Asbestos Site, Interim Ring Levee, Alviso, California - April, 1988.

The Raisch Company has been named a potentially responsible party by EPA in connection with the above referenced site. Raisch wishes to express its strong objection to the inadequate time allowed to prepare and submit comments to the OUFS. The above site has been on a national priorities list since 1984. EPA first contacted a potentially responsible party with respect to the ring levee in 1985 (the City of San Jose). Despite EPA having full knowledge of the source of the material used to construct the ring levee, it was not until the end of February, 1988, that EPA notified The Raisch Company that it was a potentially responsible party. The failure of EPA to notify The Raisch Company at an earlier date has prevented and prohibited the company from participating in the extensive studies, investigations, and other activities that have led to the issuance of the above referenced OUFS. It is apparent that the OUFS took months, if not years, to prepare. It references almost a hundred studies relied on in its preparation. To allow a response period of less than six weeks is not only inadequate, but it appears as an attempt by the Environmental Protection Agency to prohibit The Raisch Company from creating an adequate administrative record to defend against future EPA actions regarding this site. The OUFS relies extensively on technical experts in connection with air monitoring, risk assessments, and the like. The conclusions as to appropriate remedial actions rely heavily on these technical aspects of the report. In order to adequately comment on the report, it is necessary for the responsible parties to have adequate time to retain their own technical experts to review and comment on the studies relied on by the authors of the OUFS. The short time allowed for comment combined with EPA's delay in including Raisch Company as a potentially responsible party practically prohibits the use of outside consultants and technical experts in connection with a review of the OUFS and its supporting documentation.

The failure to allow adequate time to create an administrative record and submit appropriate comments to the OUFS is particularly pertinent in this case since EPA has made it clear that they intend the remedial action selected in the OUFS process to be the permanent solution for the ring levee. The Remedial Investigation Feasibility Study (RIFS) which is ongoing for the Alviso South Bay Asbestos Site will already have been prejudged by the remedial action selected in the OUFS process.

It is Raisch's strong belief that the inadequate time allowed to respond to the OUFS in this particular matter constitutes a violation of Section 113K(2)(B)(ii) of the Comprehensive Environmental Response, Compensation, Liability Act of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986 requiring that EPA allow participants in a CERCLA site "a reasonable opportunity to comment and provide information regarding the plan", and further constitutes a violation of Section 113K(2)(D) which mandates that EPA "shall make reasonable efforts to identify and notify potentially responsible parties as early as possible before selection of a response action".

Additional comments on the OUFS are attached to this letter.

Very truly yours,

TINNING & DeLAP

Keith Howard

KH/ms

Enclosures

ASBESTOS HEALTH RISKS

The text of the OUFS makes no mention of the different types of asbestos existing in the environment nor does the text make any distinction regarding the health hazards of one type of asbestos versus another.

The term asbestos is a broad categorization of various fibrous inorganic materials. There are distinct chemical and structural differences between the two asbestiform groups: serpentine and amphibole minerals.

There are a multitude of studies of the asbestiform varieties. Generally these studies conclude that the amphibole group (crocidolite, amosite, termolite-actinolite, and anphrophylite) is quite potent and pose substantial health risks. There is uncontrovertible evidence that the serpentine group (chrysotile) is far less hazardous than the amphiboles and that its production and use can and is being successfully regulated.

Serpentine formations (the source of the rock in the Alviso ring levee) are widespread throughout California and Santa Clara County and, in fact, serpentine rock is the "state rock". Attached hereto and incorporated herein by reference are a number of articles and reports (Asbestos Health Risks Exhibits __1__ through __5__) discussing the differences between chrysotile asbestos and the amphibole types discussed above.

The conclusion can be drawn from the attached reports that the concentrations of chrysotile asbestos found in the air in Alviso does not constitute a significant health risk.

AIR MONITORING

The OUFS states that the risk from asbestos is due to inhalation of fibers from the air (OUFS Section 1-19). The air monitoring of asbestos fibers in Alviso done to date is inadequate to support any remedial action for the ring levee.

Air monitoring was first conducted by Woodward Clyde on behalf of the City of San Jose prior to the use of any chemical suppressant on the levee. (OUFS, 1-19; copy of Woodward Clyde report attached as Air Monitoring Exhibit 1) The sampling consisted of only six days. The OUFS points out that optical microscopy analysis of the samples showed that in all six upwind/downwind sample pairs that the downwind concentrations were less or equal to the concentrations upwind of the dike. (OUFS, 1-21) Furthermore, the sampling did not take into account what type of asbestos fibers were found in the air. The asbestos in the levee is chrysotile, a naturally occurring asbestos. The town of Alviso has been identified as a Federal Superfund site because of the levee and because of the deposit of other types of asbestos bearing material in the town itself. As set forth in the conclusion of the Woodward Clyde report, the testing they undertook failed to distinguish and/or isolate asbestos originating from other activities in Alviso from naturally occurring asbestos in the ring levee. No effort was made in the Woodward Clyde sampling to distinguish air borne asbestos originating from man-caused activities and asbestos originating from naturally occurring asbestos in the ring levee. Extensive testing undertaken by the California Air Resources Board (ARB) to determine ambient concentration of asbestos throughout California demonstrates the feasibility of distinguishing between the different types of asbestos fibers. (California Air Resources Board Final Report - Ambient Asbestos Concentrations in California, Volumes I and II prepared by Science Applications, Inc., December 1983) (OUFS, 1-26; copy attached as Air Monitoring Exhibit 2)

In connection with the California Department of Health Services "worst case" testing done in June of 1985, no control test was conducted. Because serpentine rock is California's most prevalent rock (serpentine rock is the type used to construct the levee and contains naturally occurring asbestos) and, in fact, is the California state rock, it is very likely that had the same tests conducted by DHS been conducted on any exposed serpentine rock anywhere in California that similar results would have been obtained.

More recent ambient air analysis in Alviso conducted by

EPA and not included in the OUFS is referred to in EPA's "supplemental sheet" dated April 28, 1988, entitled "Operable Unit Feasibility Study, South Bay Asbestos Area Superfund Site, Alviso, California" (copy attached as Air Monitoring Exhibit 3). This document indicates the following with respect to the most recent air monitoring:

> "Based on air monitoring data, there are low levels of asbestos present in the atmosphere throughout the community. This is not uncommon in many urban environments. Although the asbestos levels are generally slightly higher downwind of the levee, the differences are not statistically significant. These experiments are not considered conclusive at this time and the data is being reanalyzed...The levels of ambient airborne asbestos in the community at present do not appear to differ significantly from other nearby communities."

The above referenced 1983 ARB report on ambient concentration of asbestos through California indicates that the levels found in the air in Alviso are not significantly higher than the levels found in San Jose in general.

In summary, the ambient air testing done to date in Alviso has failed to isolate the ring level as the source of asbestos in the air in Alviso and has failed to demonstrate that the ambient air concentrations of asbestos in the Alviso area are significantly different than in the surrounding San Jose area.

REMEDIAL ACTION ALTERNATIVES

The OUFS failed to discuss several practical, feasible, and cost-effective remedial action alternatives and in some cases does not adequately address the remedial action alternatives identified.

No Action Alternative:

As set forth in the comments regarding Asbestos Health Risks, no demonstration has been made that there are adverse health effects from chrysotile asbestos in the concentrations found in the ambient air at the Alviso site. The ambient air testing has failed to isolate the ring levee as the source or a source of asbestos in the ambient air at Alviso and evidence is not presented to indicate that the concentrations of asbestos in the air in Alviso are significantly different than concentrations in the Greater San Jose area. For all of these reasons, the selected alternative should be no action.

Chemical Soil Suppressant:

This alternative is discussed in the OUFS only in terms of its potential permanent application. Supposedly the OUFS is recommending interim measures for the South Bay Asbestos Site. The long term and permanent solutions are to be covered in the ongoing RIFS. The chemical suppression treatment, which has been in effect since May of 1986, appears to have been markedly successful. The ambient air samples taken by EPA since the application of the soil suppressant has revealed no higher ambient air concentrations of asbestos than is found in surrounding communities. It would appear that the continued and "temporary" application of the chemical soil suppressant at least until the conclusion of the RIFS would be the most logical and rational approach to the ring levee. Such an approach is the only alternative that has no potential of being in direct conflict with an ultimate solution for the ring levee, whatever that may be. The continued "temporary" application of chemical soil suppressant is also consistent with a City of San Jose and Army Corps of Engineers' plan for flood control improvements to the Coyote and Guadalupe Rivers in the Alviso area. These projects, some of which have commenced, address the cause of the 1983 flooding which led to the construction of the levee. It is believed that once these flood control measures have been implemented that the need for the levee would no longer exist and it could then be removed pursuant to the alternative discussed below. Continued soil suppressant use in the interim would provide protection from the levee until the permanent solution could be implemented.

Incorporation of Ring Levee Into New Permanent Levee:

As pointed out in the OUFS, the ring levee was built as an emergency measure in an attempt to protect the citizens of Alviso from floodwaters during a period of extremely heavy rains. After construction of the ring levee, the City of San Jose in 1984 prepared a draft Environmental Impact Report for a permanent levee. The City and the Corps of Engineers have both discussed the feasibility and possibility of incorporating the existing ring levee into a larger and more permanent levee structure for the protection of the town of Alviso from floodwaters. If in fact this project proceeds, the existing levee would be an ideal base for a new levee. The existing ring levee would be covered with more than ample material to prevent the escape of any asbestos containing material into the air. The use of the existing ring levee and/or the materials in the existing ring levee would be far and away the most cost efficient and practical method of construction of a new permanent levee. No consideration is given to this alternative in the OUFS despite the fact that such a plan is being and has been considered for a number of years by the City of San Jose and the Army Corps of Engineers and is the subject of the above mentioned Environmental Impact Report. Pending the permitting and construction of the permanent levee, the continued use of chemical soil suppressants would all but eliminate the risks claimed to be associated with the existing levee.

Removal and Relocation of Ring Levee Material to a Project Needing Fill and/or to the Quarries of Origination:

The volumes of studies, reports, and documentation relating to asbestos fibers of the type found in serpentine rock clearly reveal that the fibers are hazardous only in the event of inhalation. That is, the material is not inherently hazardous but can become hazardous if released to the atmosphere and inhaled in high concentrations over long periods of time. If the asbestos containing rock has no potential for release to the atmosphere, it becomes non-hazardous. In fact, the asbestos containing rock is a naturally occurring substance throughout the United States and is used throughout the United States as bedrock for uncountable construction projects typically including roadways, parking lots, and the like. A practical, permanent and cost effective solution to any risk created by the ring levee would be to remove the material comprising the ring levee to a nearby highway construction project where the material would be utilized as a base fill and covered with sufficient non-asbestos containing material and/or sealed with asphalt in conjunction with such project to prevent the future escape of any material into the atmosphere. The need for significant amounts of such fill in connection with highway construction is unquestioned and there is little doubt that a suitable project site could be found within the immediate vicinity of the ring levee. This alternative not only permanently removes the material from the Alviso area and disposes of it in a manner where the material is rendered non-hazardous, but it is also the most cost effective alternative and minimizes any transportation problems related to any other removal alternative (i.e., to a permitted facility).

If for some reason a suitable project could not be found to utilize the ring levee fill material, the material could be returned to its "quarries of origin" for future use as fill material under circumstances protecting escape of asbestos into the air. The ability to work with asbestos containing serpentine in a safe manner is clearly demonstrated in the Summary Report, Serpentine/Asbestos Public Health Analysis attached as Exhibit 1.

Section 122(b)(1) of CERCLA provides:

> "Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity, or mobility of hazardous substances, pollutants and contaminants is a principle element and are preferred over remedial actions not involving such treatment. These latter two alternatives, i.e., removal to a nearby project site and/or removal to the quarries of origin

This section goes on to provide:

> "The president shall select a remedial action that is protective of human health and the environment that is cost effective, and that utilizes permanent solutions and alternative treatment technology or resource recovery technology to the maximum extent practicable. If the president selects remedial action not appropriate for a preference under this section, the president shall publish an explanation as to why a remedial action involving such reductions was not selected."

Finally, subsection (b)(2) of Section 121 provides:

> "The president may select an alternative remedial action meeting the objectives of this subsection whether or not

such action has been achieved in practice at any other facility or site that has similar characteristics. In making such a selection, the president may take into account the degree of support for such remedial action by the parties interested in such site."

The solutions offered by these alternatives, removal to a suitable construction site or the quarries of origination, are consistent with other federal laws and regulations and remove all problems associated with leaving the levee in place. As an emergency construction project, the ring levee was constructed without many of the required permits and investigations which would normally be undertaken in connection with a project of this nature. No Bay Conservation and Development Commission permit was obtained, no Environmental Impact Report was done prior to construction of the levee, no 404 Clean Water Act permits were obtained and no wetland mitigation provided. Removal of the levee resolves all of these problems.

INDEX
Attachments to EPA Letter Addressed to Nancy Woo
Dated May 24, 1988

1. Asbestos Health Risks

    Exhibit 1 - Article from California Mining dated September 1986

    Exhibit 2 - Geological Occurrences and Health Hazards of Amphibole and Serpentine Asbestos by Malcolm Ross of U.S. Geological Survey

    Exhibit 3 - Article from British Journal of Industrial Medicine 1980 entitled "Dust Exposure and Mortality in Chrysotile Mining, 1910-75"

    Exhibit 4 - Letter from Robert G. Coleman, Ph.D. of Stanford University dated March 25, 1986, addressed to Board Secretary, Air Resources Board

    Exhibit 5 - Letter from Malcolm Ross of U.S. Department of Interior dated February 28, 1985, addressed to Dr. Bernard D. Goldstein of the U.S. EPA

2. Air Monitoring

    Exhibit 1 - Woodward Clyde Report

    Exhibit 2 - State of California Air Resources Board Staff Report and Final Report, Volumes I and II

    Exhibit 3 - EPA's Supplemental Sheet to OUFS

3. Remedial Action Alternatives

    Exhibit 1 - Summary Report: Serpentine/Asbestos Public Health Analysis

Comments Submitted by

The City of San Jose

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TELEPHONE (408) 277-4000

OFFICE OF ENVIRONMENTAL
MANAGEMENT

CITY MANAGER

May 25, 1988

DELIVERED BY MESSENGER

Nancy Woo
Remedial Project Manager
U.S. Environmental Protection Agency
215 Fremont Street (T-4-3)
San Francisco, CA 94105

Re: COMMENTS ON OPERABLE UNIT FEASIBILITY STUDY,
SOUTH BAY ASBESTOS SITE, INTERIM RING LEVEE,
ALVISO, CALIFORNIA

Dear Ms. Woo:

This letter and its enclosures constitute the City of San Jose's comments on the Operable Unit Feasibility Study (OUFS) for the Alviso Ring Levee.

At the outset we wish to state that it is apparent that considerable effort was expended by EPA and its consultants in the preparation of the OUFS. Nonetheless the study has some critically important shortcomings. It is the City's position that these shortcomings render the OUFS substantially deficient. It is our view that the OUFS is not complete enough, at this point, to serve as a basis for decision. More work will be required before the OUFS can be said to be adequate to the task of analyzing the risks and providing an adequate evaluation of the appropriate remedial actions.

For example, and as will be addressed in greater detail, the OUFS does not properly address the question of causation, i.e., whether whatever asbestos that is present in various other parts of Alviso (including the atmosphere) came from the naturally occurring chrysotile asbestos contained in the serpentine rocks and soil in the levee. Indeed, the City submits that there is considerable evidence that much, if not all, asbestos which may be found in Alviso came from sources other than the levee. Furthermore, the City points out that the naturally occurring chrysotile asbestos in the serpentine rock and soil at the Alviso Ring Levee is no different than the naturally occurring chrysotile asbestos found in serpentine rocks and soil in many other areas in California. It poses no different health hazard. It should be treated no differently than if the levee were a natural formation. The City further contends that EPA has inadequate information to conclude that a health risk may exist in Alviso as a result of the serpentine rocks and soil in the levee.

The City also contends that critical engineering questions have not been adequately examined. For example, the OUFS fails to examine the flood control ramifications of the proposed remedial alternatives. There is no engineering analysis as to whether the modifications to the levee, under the several alternatives, would increase the risk of flood damage. Without a thorough study of the alternatives in the light of their potential flood control impacts, the OUFS is simply incomplete. Before any decision is made to leave the levee in its present location, add cover material to it, or to remove it, an engineering study of the levee must be conducted. At a minimum, a complete study of the levee should consider whether, with a cover, the levee would withstand flooding. Compaction tests should be conducted prior to any decision to add cover to the levee. Only when these tests are conducted, and their results included in the OUFS, can the OUFS be regarded as adequate. The failure to consider the flood control ramifications of the remedial alternatives renders the OUFS deficient.

To the extent EPA conceptualizes the Ring Levee as a hazardous waste site it commits a fundamental error. The levee should be considered as a "community structure." See 42 U.S.C. Section 9604 (c)(3)(B). Its character as waste is questionable: It is soil and dirt, containing naturally occurring, unprocessed, unmanufactured serpentine material, which contains chrysotile asbestos. As pointed out above, the soil and rock in the levee is no different than that found in nature in numerous sites in California.

Turning to aesthetic issues, it is the City's position that if the EPA were to select a remedy other than removal, and health and flood/engineering issues were equal, then the most desirable remedy is the one which would provide for an acceptable appearance of the levee, one which meets the aesthetic needs of the Alviso community. A soil cover, with low maintenance native plants and gunite only where it is necessary, would be preferable, certainly to the plain gunite cover. The City strongly urges that the views of the Alviso community be taken into account on matters such as desirability of a walking-jogging path, benches, and other amenities, if the safety of the community is assured.

A recent search of City files has revealed the possibility that it may be appropriate to designate additional potentially responsible parties (PRPs). These include the U.S. Department of the Interior, Piazza Construction, Hillsdale Quarry, and W. H. Ebert Construction. Piazza and Ebert evidently performed construction work on various portions of the levee. Their work evidently included procuring and transporting more than 1,500 tons of the rocks and soil used in the levee. (The material came from Hillsdale). The Department of the Interior apparently financed the activities of Piazza, and by so doing, may have become an "owner" or "operator."

Any remedial orders should consider both long and short term solutions, and should provide for subsequent alterations, for example to permit work to be undertaken on the ultimate levee. Any removal and rebuilding which might be permitted should be accomplished between April 15th and October 15th, in view of weather considerations. As indicated above, flooding/engineering studies are recommended as a necessary factor in selection of the appropriate remedial alternative. Removal of all or any part of the levee should be considered only after flooding/engineering studies have been conducted, and adequate flood control measures, if required, are taken. Of course the effects of transportation and disposal should be carefully considered, before any removal is ordered.

The City contends that the EPA's refusal to extend the comment period as requested by the City constitutes an abuse of discretion which, under the circumstances, has denied the City due process of law. The matter of asbestos contamination is complex. Data as to asbestos health risks is incomplete, especially as to chrysotile asbestos. The comment period allotted to the City, thirty days, plus a two-week extension, was simply too brief to permit the City to fully address matters of the complexity involved in the OUFS. EPA's denial of the City's request for a sixty day extension hindered the City in conducting its review of the OUFS, prevented a study of other alternatives and combinations of alternatives, and in preparing full comments on the OUFS. As a consequence, the City asserts that it has been denied due process of law.

In addition to the foregoing comments on the OUFS as a whole, the City has a number of concerns with various specific sections of the OUFS. These are addressed separately in the attached comments, which are incorporated by this reference.

The City of San Jose extends its appreciation for the close consideration we anticipate will be given to our comments. We regret that time limitations constrained our efforts to provide full comments. We would welcome an opportunity to submit further comments.

Sincerely,

Michelle Yesney

Michelle Yesney
Director
Office of Environmental Management

MY:RCY:GL:nn

Enclosures

"EXECUTIVE SUMMARY"

Pg. ES-1, lines 3-4:

"The ring levee is an earthen flood control dike about 2 miles long and 6 to 8 feet high which surrounds most of the community of Alviso..."

Comments:

This statement regarding the height conflicts with other statements in the report. For example, page 1-12, Section 1.3.2, "Description of the Levee", at line 28-30 states:

> "The ring levee is approximately five feet in height with a trapezoidal shape, two miles in length, and surrounds the town of Alviso on the east, north, and northwest (Figure 1-2)."

Page 1-6, "Site History", at line 17-20 states:

> "The ring levee is approximately two miles long, and average of four to five feet in height and eight to twelve feet in width, and surrounds nearly three-quarters of Alviso. The levee material was apparently imported from quarries in San Jose and Cupertino."

Surrounding the town on the east, north, and northwest, means that slightly over half of the town is surrounded by the levee (five-eighths if northwest is considered 1/8th of the circumference) and does not reasonably imply that "most of the community" is surrounded.

"EXECUTIVE SUMMARY"

Pg. ES-1, lines 6-8:

"The levee was constructed in 1983, immediately after a major flood, as part of the City of San Jose and County of Santa Clara's plans to provide improved flood protection to the area."

Comments:

Portions of the levee were constructed during the flood, not after. Accurate placement of the emergency levee, in terms of conforming to existing property lines, was hampered by the flood conditions (parts of the area were under water).

The City of San Jose did not then and does not now have primary jurisdiction or responsibility for providing flood protection. Prior to the emergency action, no plans were being developed by the City to construct a levee. The statement that the City and the County were jointly planning to provide flood protection is incorrect. The Santa Clara Valley Water District is the public agency charged with flood control responsibility.

"EXECUTIVE SUMMARY"

Pg. ES-1, lines 8-10:

"The source of the material used for the levee was a rock quarry containing asbestos, and the soils in the levee contain up to 40 percent asbestos."

Page 1-6, lines 16-19, "SITE HISTORY", states:

"The ring levee is approximately two miles long, an average of four to five feet in height and eight to twelve feet in width, and surrounds nearly three-quarters of Alviso. The levee material was apparently imported from quarries in San Jose and Cupertino."

Comments:

Research on the part of the City reveals that the sources of the material the levee was constructed from includes at least two quarries. Records indicate that soil was imported from both the Raisch Quarry and the Hillsdale Quarry. It is not known at this time whether the Hillsdale Quarry materials contained asbestos. It is not known what quarry in Cupertino is referred to.

EPA should investigate more thoroughly the sources of the material that the levee was constructed from and whether those sources contained asbestos in order to accurately identify all Potential Responsible Parties, as required by 42 U.S.C Section 9613(k)(2)(D).

"EXECUTIVE SUMMARY"

Pg. ES-2, lines 6-8:

"The majority of the alternatives were eliminated because of unproven technology, lack of documentation of protectiveness of human health, or high cost."

Comments:

At issue is whether the implied elimination of the removal option due to "high costs" is valid. The fact is that the review of the option of removal and its subsequent dismissal as a cost effective option was based on the administrative requirement by EPA to dispose of the material in a "RCRA" approved hazardous waste disposal facility. Additional potential locations for disposal should be considered. Existing EPA policy requiring that naturally occurring asbestos material in soil and rocks be disposed of only in RCRA-approved facilities (when asbestos can be safely disposed of by burial which does not pose any long term threat by migration), should be examined prior to dismissal of the removal option as too costly.

The history of EPA's actions for asbestos abatement includes instances where asbestos material, once safely buried, was excavated and reburied at high cost with no additional increased protection, is often cited as an extreme example of bureaucratic mismanagement.

"EXECUTIVE SUMMARY"

Pg. ES-2, lines 15-17:

"The gunite cover requires fewer easements and is easier to implement, but may not be acceptable to the community and other agencies."

Comments:

It is not clear what the term "easements" means here. If it applies to easements needed to apply the gunite versus the soil cap, then the statement may be true. If easements for the placement of the levee are in question, it is not clear why the gunite option would eliminate any required easements. Speculating as to what will be acceptable to the public is not appropriate. They should be consulted and heeded.

Section 1, "INTRODUCTION"

Section 1.1 "Purpose" Pg. 1-1, lines 15-19:

"Because the flood control levee, or ring levee, appears to be a significant source of asbestos, EPA has chosen to separate and accelerate the remediation process for the levee by designating it an "operable unit." (Underscore added).

Comments:

The quoted language seems to indicate that asbestos found elsewhere came from the levee ("source of asbestos"). However, the City contends that while naturally occurring chrysotile asbestos may be present in the rocks and soil in the levee, the OUFS does not establish that there has been any "significant" migration of that form of asbestos from the levee. The City submits that the tests which may indicate the possibility of migration have not been shown to have been conducted in a matter accepted as scientifically valid.

The City suggests that the sentence be reworded to state "...appears to be a discrete area where naturally occurring chrysotile asbestos is found in rocks and soil,...." The foregoing would be substituted for "...appears to be a significant source of asbestos...".

The City also points out that the naturally occurring chrysotile asbestos found in the rocks and soil in the levee is no different than the naturally occurring chrysotile asbestos found in rocks and soil in a variety of other locations, including their original (natural) locations. If the levee were a fortuitously located geological formation deposited in its present location by the forces of nature, it would not have been included in the South Bay Asbestos Area. That the levee came into being as a flood control measure, and not as a result of deposition through the course of nature should not make any difference. There was no "waste" disposal in the ordinary sense. The levee should not be treated as a waste disposal site.

142

"Section 1.2 "SITE BACKGROUND"

Section 1.2.1 "SITE LOCATION AND DESCRIPTION" Pg. 1-2, lines 19-21:

"Flooding occurs because of the site's proximity to the Bay and land subsidence due to ground water extraction in the vicinity."

Comments:

The City submits that the quoted language indicates that the OUFS analysis of the causes of flooding in Alviso is superficial and that additional analysis is required before a remedy is selected. The City suggests that "proximity to the Bay and land subsidence...." fails to take into consideration a variety of factors relevant to an evaluation of flooding risks.

If proximity to the Bay and land subsidence were the only factors, all lands below the level of the Bay would be submerged at all times. Obviously more is involved in determining whether flooding, especially from non-bay sources, is caused or influenced by any natural or man-made factors, including but not limited to other flood control devices.

Without an examination which goes beyond "proximity to the Bay and land subsidence..." the OUFS is deficient and provides an inadequate basis for selection of the suitability, vis-a-vis the flooding potential, of any of the alternatives. This is of no little significance. In the absence of evidence establishing that the remedial action will not increase the risk of flooding, a prudent PRP might be compelled to resist a remedial order, in an effort to insulate itself from liability for flood damage and asbestos contamination which might result from flood water erosion and dispersal of the levee.

Section 1.2 "SITE BACKGROUND"

Section 1.2.2 "SITE HISTORY" Pg. 1-6, lines 1-2:

"The City of San Jose constructed the ring levee after a disastrous flood in March 1983...."

Comments:

The levee was constructed during, not after, the flood.

144

Section 1.2 "SITE BACKGROUND"

Section 1.2.2 "SITE HISTORY" Pg. 1-6, lines 6-9:

> "The City proceeded with construction without a permit from the Army Corps of Engineers (COE) who has jurisdiction over such construction, and without consultation with the Federal and State agencies involved."

Comments:

It is the City's position that the flooding emergency simply left no time to consult the various agencies involved. Moreover, applicable regulations contemplate emergency situations, and provide for "after-the-fact" permitting.

Section 1.2 "SITE BACKGROUND"

Section 1.2.2 "SITE HISTORY" Pg. 1-6, lines 8-13:

"The City placed the "ring levee" in the approximate location of its tentatively planned flood-control levee, termed the "ultimate levee" (Figure 1-3) which would join the Guadalupe River levee at a top elevation of 10.0 to 11.5 feet (City of San Jose, 1984). The unfunded, tentative flood control plan was the basis for construction of the existing ring levee."

Comments:

The City had no plans to construct a levee prior to the 1983 flood. There was no "tentative flood control plan" prior to the construction of the emergency ring levee and the document cited by EPA postdates the construction activity.

Section 1.2 "SITE BACKGROUND"

Section 1.2.2 "SITE HISTORY" Pg. 1-6, lines 18-19:

"The levee material was apparently imported from quarries in San Jose and Cupertino."

Comments:

This statement conflicts with an earlier statement found on pg. ES-1, lines 8 and 10.

> "The source of the material used for the levee was a rock quarry containing asbestos, and the soils in the levee contain up to 40 percent asbestos."

If EPA has identified an additional quarry source for the fill, the source should be cited, the source should be investigated to ascertain whether it contains asbestos, and the source should be identified as a Potentially Responsible Party, as required by 42 U.S.C. Section 9613(k)(2)(D).

Section 1.2 "SITE BACKGROUND"

Section 1.2.2 "SITE HISTORY" Pg. 1-8, lines 9-12:

"The level of airborne asbestos generated was approximately 100 times higher than the Occupational Health and Safety Administration (OSHA) Permissible exposure limit (explained in more detail in Section 1.3.1) and prompted the DHS to contact EPA."

__Comments:__

The OUFS fails to establish either the relevance or validity of the raking and shoveling "experiment" (not _test_, not _sampling method_, but "_experiment_") or that the OSHA permissive exposure limit (for occupational settings) is applicable to environmental naturally occurring chrysotile asbestos when it is not artificially disturbed by raking and shoveling in front of a fan. (To the City's knowledge raking and shoveling the levee is an activity pursued only by representatives of DHS and EPA).

148

Section 1.2 "SITE BACKGROUND"

Section 1.2.2 "SITE HISTORY" Pg 1-10, lines 1-5:

"When the asbestos fibers in a solid material, such as soil or insulation, are released into the air and inhaled, the adverse human health effects are extremely serious. Asbestos is one of 20 known human carcinogens and also causes other lung diseases. Asbestos has been throughly examined in numerous epidemiology studies."

Comments:

The quoted language is both too general and too brief. It is simply not the case that studies show, or permit the reasonable conclusion, that inhalation of any single asbestos fiber, of any size, will invariably produce an extremely adverse human health effect. Indeed, some fibers, notably chrysotile, as a result of their size and susceptibility to acid decomposition, seem to pose a lower risk of adverse health effects.

Moreover, it is submitted that not all forms of asbestos have been thoroughly examined "in numerous epidemiology studies." There have been numerous studies. These were not uniform, and many did not (were not able to) distinguish one form of asbestos, chrysotile, from others. The quoted language is therefore misleading. The distinctions in the studies of the effects of various forms of asbestos are simply too important to justify indiscreet use of the inaccurate collective term "asbestos."

Section 1.2 "SITE BACKGROUND"

Section 1.2.2 "SITE HISTORY" Pg. 1-12, lines 8-9:

"Although the OSHA 0.2 fiber/cc workplace standard is the only promulgated health standard for asbestos, EPA is concerned about any asbestos exposure."

lines 12-14:

"EPA recognizes that a certain background concentration of asbestos exists in the atmosphere, caused by asbestos product use and natural sources, which cannot be remedied."

lines 25-26:

"In conclusion, the adverse health effects of asbestos are well documented, with no known safe threshold of exposure."

Comments:

EPA's concern for asbestos exposure is appreciated, but concern does not mean that a particular action contemplated by EPA is justified. The fact is that, to date, EPA has not found a justifiable basis for the promulgation of appropriate standards for naturally occurring asbestos in rocks and soil. This is why EPA has not promulgated standards or regulations applicable to chrysotile asbestos in its naturally occurring form, in soil and rock. Acting against the levee on the basis of data that is incomplete - or worse - in the face of data indicating that different forms of asbestos pose different risks, and that chrysotile may well pose the least risk, would be arbitrary and capricious.

In addition, it is submitted that where, as here, the

> "Levels of ambient airborne asbestos in the community doe not appear to differ significantly from other nearby communities" (OUFS supp. sheet, April 28, 1988),

there is no justification for EPA to take action until all unresolved matters have been addressed. To act otherwise would deny the rights of Alvisans and the PRPs to an informed reasonable judgment, and procedural due process.

Section 1.3.2 "DESCRIPTION OF THE LEVEE"

Pg. 1-12, lines 28-29, Pg 1-13, line 1:

"The levee is generally rounded in shape, with side slopes generally steeper than 2:1, and covers an area of approximately eight acres."

Comments:

The area said to be covered by the levee appears to be an error. Appendix Page C-1 cites an initial loss in acreage calculation made by the U.S. Army Corps of Engineers (letter from the Corps of Engineers to the City of San Jose, Feb. 9. 1987) as being 4.2 acres. An additional area of approximately 4.0 acres is cited as being required for the proposed capping option.

Section 1, "INTRODUCTION"

Pg. 1-21, lines 24-25:

"Based on the TEM results, it appears likely that the ring levee was contributing asbestos to the ambient air in Alviso during windy periods."

Comments:

This statement seems to be an unsupported assumption or opinion. The testing cited does not appear to be designed to differentiate between different sources of asbestos dust. Considering the widespread indiscriminate dumping of asbestos containing wastes that have taken place, the large amount of unpaved dirt roads and commercial areas known to contain asbestos dust, and the lack of control of this source of re-entrained dust generated by both wind and vehicle traffic, it would seem appropriate to assume that other sources, besides the levee, are principal contributors. It is not clear how, based on the TEM results cited, the conclusion stated, "it appears likely that the ring levee was contributing asbestos", is supported by evidence. In fact, as noted in the following paragraph in the text, evidence exists that could refute that assumption:

Page 1-21, lines 29-30:

> "Results of the PCLM, or optical microscopy, analysis showed opposite results (Table 1-2)."

Section 1 "BACKGROUND

Section 1.3.2 "DESCRIPTION OF THE LEVEE" Pg. 1-21, lines 24-27:

"Results of the PCLM, or optical microscopy, analysis showed opposite results (Table 1-2). In all 6 upwind/downwind sample pairs, the downwind concentrations were less than, or equal to, the concentrations upwind of the dike."

Comments:

The OUFS supplemental sheet dated April 28, 1988 also comments on upwind/downwind sampling, noting that the differences "are not statistically significant..." and that "the experiments are not considered conclusive at this time and the data are being reanalyzed...." Most unfortunately, the OUFS supplemental sheet does not identify which experiments "are not considered conclusive" and which data is being reanalyzed, or why. EPA's failure to identify these experiments, or to say why they are not considered conclusive leaves the matter open to speculation and denies commenters the opportunity to present arguments or evidence on this point. The result is a denial of an effective opportunity to comment, a denial of due process.

Section 2 "REMEDIAL ACTIONS ALTERNATIVES"

"ASBESTOS TOXICITY" Pg. 2-2, lines 18-20:

"Therefore to be consistent with EPA's policy and standard of practice, site remediation should control containment releases so that the risk from exposure is insignificant."

Comments:

This statement seems to highlight the scientific and policy dilemma faced by EPA. A no-threshold exposure value for which there is no danger of cancer from exposure is cited in the previous sentence as the level required for safety. How, considering ambient background levels in existence throughout the entire area, excluding the Alviso area, can an assessment of the efficiency of any proposed remediation method be determined as decreasing risk to an (undefined) "insignificant" level? Only the complete elimination of asbestos from the ambient environment could be considered as a zero threshold or "insignificant" risk.

154

Section 2 "REMEDIAL ACTIONS ALTERNATIVES"

"ASBESTOS TOXICITY" Pg. 2-2, line 20:

"Asbestos is present in the levee soils in amounts up to 40 percent (as measured by PLM and TEM). The value is 2,000 times more than the Region IX air guideline of 200ppm in soil (0.02%) which would cause a (10 to the minus 4) risk in air under worst-case assumptions."

Comments:

This is not a valid worst-case assumption for the simple reason that we know, at least with some statistical certainty, that the highest level observed is not a valid likely mean value. Even a worst-case assumption has to be tempered by some reasonable estimate of the likely percent of asbestos present in the fill. A worst-case assumption does not allow choosing a discrete data that may fit a previously taken assumption or unrecognized bias. We would suggest, if this section is to serve some function, that the worst-case assumption be based on a concentration based on the mean, not the extreme of the existing data.

An additional flaw in this logic is the general assumption that a concentration of asbestos in soil can be projected to a lifetime exposure and a predicted level in air. The OUFS contains no substantiation for that assumption.

Section 2 "REMEDIAL ACTIONS ALTERNATIVES"

Pg. 2-4, Under "Description of NESHAP" in table

> Controls on asbestos use include "no visible emissions", and prohibits the use of asbestos mine waste for surfacing."

and in the text following the table

"Since there are no regulations or health standards that apply directly to outdoor air asbestos concentrations, the risk from asbestos in the levee soils has been calculated under the No Action alternative in Section 4.0."

Comments:

EPA's description of the NESHAP neglects to mention that there is apparently no prohibition which addresses the use of rocks and soil which contain chrysotile asbestos in its naturally occurring form from being used as fill material for levees, dikes, roadbeds, or any other purpose. Conceptually, it would seem that the rocks and soil in the levee are no different from any other serpentine rocks and soil in their natural settings. To order action against the levee, and not other sites where serpentine rocks and soil are found, without stating a rationale for making the distinction, is not justified. The OUFS contains no such rationale.

Section 2 "REMEDIAL ACTIONS ALTERNATIVES"

Section 2.5.3 "OFF-SITE CONTAINMENT" Pg. 2-24, lines 18-21:

> "Regulations prohibit transporting hazardous wastes to a non-RCRA-permitted off-site location for disposal. RCRA landfills will be the only off-site containment technology evaluated in this feasibility study."

Comments:

This statement constitutes the basic underlying flaw present in both EPA's approach to the general problem of naturally occurring asbestos and the Feasibility Study presented in the OUFS under consideration. It represents an illogical interpretation of policy.

While EPA has classified asbestos as a carcinogen, it must nevertheless be recognized that naturally occurring forms of asbestos present a unique and distinctly different challenge. The naturally occurring forms of asbestos found in the soil at the site do not require the stringent criteria and controls needed for final disposal that other hazardous wastes present. In many other states within the United States, this material is not considered a hazardous waste as it is in California. The appropriate long-term disposal requirement for asbestos-containing soil is burial. It does not require specific liners or other controls at the burial site because asbestos is both chemically inert and insoluble in water so that migration is not a problem. The enormous amounts of this material currently safely contained by nature support this statement.

Limiting the study to consideration of RCRA landfills is a failure to consider reasonable alternatives. It is submitted that removal and placement of the material in a burial site is an option which must be evaluated if the study is

Section 2 "REMEDIAL ACTIONS ALTERNATIVES"

Section 2.5.3 "OFF-SITE CONTAINMENT" Pg. 2-24, lines 18-21 (Cont.):

Comments:

to be complete. For example, consideration might be given to using the rock and soil as freeway construction fill, so it could be paved over with concrete, in much the way that other serpentine rock and soil is used. That is not to say that the City necessarily endorses this option; it is simply to suggest that the OUFS is incomplete without consideration of the option. This is especially the case if EPA flooding/engineering studies suggest that one of the cover alternatives would pose a risk of future flood damage.

The fact that the EPA has to discard what may be the safest and best long-term solution, removal and burial, because EPA's administrative requirements are inflexible, has extreme implications for this project.

The fact that asbestos-containing soils are routinely being excavated and used within this region and throughout the state, without similar controls or concern only confounds public perception of this issue.

Consideration must be given by EPA to not requiring asbestos-containing soil to be disposed of in a RCRA landfill. Indeed, the City submits that disposal in a RCRA landfill is not required. 40 C.F.R. Section 300.65. Any available class II or class III landfill should be considered for the disposal of this site. Additionally, a non-landfill burial site which will provide a final resting place for the material, such as a quarry, should also be considered.

Section 3 "INITIAL SCREENING OF REMEDIAL ACTIONS ALTERNATIVES"

"Effectiveness" Pg. 3-15, lines 20-22:

(Of off-site removal) "However, risks to human health and the environment during implementation are likely to be the highest with this alternative, due to the extensive excavation and hauling activities."

Comments:

This statement seems to be an unsupported opinion. Appropriate mitigation measures are available and are routinely used in various projects to mitigate the potential dust generation from excavation. Similarly, the transportation of hazardous waste is regulated and, aside from potential vehicle accidents which could release the soil, the excavation and transport of material should not present a health threat. It should be recognized that serpentine rocks and soil are routinely being excavated and hauled throughout California, and in many other parts of the nation. No restrictions or controls have been set by EPA which covers those operations. If controls are needed, they should be promulgated. The inference to be drawn from the failure to promulgate such regulations is that none are needed.

Section 3 "INITIAL SCREENING OF REMEDIAL ACTIONS ALTERNATIVES"

Pg. 3-17, lines 17-19:

"The Off-Site RCRA Landfill alternative has also been screened out because capital costs are seven times more than similar alternatives."

Comments:

Removal costs cited on page 3-18, "Containment Alternatives Summary Table" indicate an estimated cost for the "Off-Site RCRA/TSCA Landfill" of $7,969,900. The other alternative option costs cited range from $1,380,600 to $2,950,400. The statement that the removal option is seven times more expensive than similar options is an obvious error in mathematical calculation and raises the question as to what other errors in calculations, perhaps less obvious, are within the body of this study and have formed the basis for some of the conclusions and recommendations contained in the document.

Section 3 "INITIAL SCREENING OF REMEDIAL ACTIONS ALTERNATIVES"

Pg. 3-20, lines 17-19:

"Since this fixation product has been identified as an asbestos source at the site, fixation as a remedial alternative may not be consistent with ARARs and EPA policy."

Comments:

There is no evidence known to the City to suggest that "this fixation product" is present in the operable unit under discussion, i.e., the Ring Levee. To the City's knowledge, the only form of asbestos in the levee is naturally occurring chrysotile asbestos found in its natural condition in the rocks and soil in the levee. Unfortunately, the quoted language illustrates shortcomings in the OUFS; the failure to differentiate between types of asbestos, and the failure to attempt to identify the source or origin of the asbestos being discussed. The City submits that the levee is a discrete, identifiable portion of the site. The failure to specifically identify "asbestos" and its source, renders this portion of the OUFS misleading.

Section 3 "INITIAL SCREENING OF REMEDIAL ACTIONS ALTERNATIVES"

"Cost" Pg. 3-27, lines 32-34:

"Estimates of total project costs, extrapolated from bench and pilot test, range from $300 to $1400/cy (University of Minnesota). Based on a treatment cost of $125/cy, the estimated capital cost of the Plasma Fusion alternative is $8,515,400."

Comments:

This estimate seems to be totally unsupported. An estimate range of cost is first cited, then ignored for no apparent reason and with no explanation. Based on the information provided, the estimated range of costs for the Plasma Fusion alternative would be $20,436,960 to $95,372,480.

Section 4 "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES"

Section 4.1.2 "WETLAND ISSUES" Pg. 4-5, lines 3-5:

"Filling activities to provide buildable land have claimed the majority of the Bay marshes over the last 100 years."

lines 15-31:

"Identified violations include:

- Executive Orders 11988 and 11900
- Clean Water Act, Section 404(b)(1)
- Endangered Species Act, Section 7
- USFWS Coordination Act and companion Mitigation Policy
- Rivers and Harbors Act, Section 10"

Comments:

No authority is cited for the statement "filling activities to provide buildable land have claimed the majority of the Bay marshes over the last 100 years." It is submitted that the statement may not be justified. It is suggested that of the "lost wetlands", 80% have been converted to salt ponds or similar uses, and that only 11% have been converted to industrial uses. It is believed that San Francisco International Airport, Oakland International and the U.S. Naval Air Station, Alameda, account for nearly all of the 11%.

As to the alleged violations, it is suggested that in the absence of notice and a hearing, followed by an adjudication, it is premature for the Agency to state flatly, without qualification, that "violations have occurred." In order to preserve its defenses, and to avoid any adverse inferences which might be drawn from failure to comment, the City of San Jose, on its own behalf, and on behalf of its present and former officers, employees and agents, specifically denies any and all "violations" referred to in the OUFS, expressly or by implication.

Section 4 "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES"

Section 4.1.2 "Wetlands Issues" Pg. 4-6, lines 5-7 and 9-11:

"The plan is a series of calculations developed by USF&W showing that 1) 194.8 acres of wetlands adjacent to the New Chicago Marsh...". "...22.5 acres of land would need to be exchanged for the eight acres lost to provide for lost habitat value."

Comments:

For the record, and to preserve its objections, the City disagrees with the USF&W calculations. It is submitted that they are without demonstrated justification in law or fact.

Section 4 "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES"

Section 4.2 "ANALYSIS OF NO ACTION ALTERNATIVE" Pg. 4-8, lines 7-10 and 32-34:

"For this risk assessment, under the chosen exposure scenario, it is assumed that the DHS "worst case" experiment is a true worst case, and that the "toy truck" experiment is a plausible worst case."

"It was assumed that a child would play on the levee for 5 hours every day for 6 days during each week of the summer months."

Comments:

The City submits that the "toy truck" experiment has not been demonstrated to be a valid method and that it has not been shown to have any scientific validity. The City disagrees that the "toy truck" experiment has been shown to be a "plausible worst case."

As to the assumption that a child would play on the levee for "5 hours every day for 6 days of each week of the summer months" it is submitted that the OUFS contains no evidence to support that assumption. Therefore, it is suggested that the exposure assumption has not been shown to have a valid basis. The exposure assumptions should be redone.

Section 4 "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES"

"COMMUNITY ACCEPTANCE" Pg. 4-14, line 2:

"No Action would not be acceptable to the community given the emergency remedial work performed to date and the information EPA has provided on the dangers of asbestos."

Comments:

This statement seems to be an unsupported opinion. The community has questioned, at the recent public meeting, why EPA has taken no action regarding the obvious sources of dust, the community streets and truck yards, but is seemed apparent that they had little knowledge regarding the "remedial work performed to date" (assuming this is a reference to the polymer spraying).

Section 4 "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES"
"STATE AND LOCAL AGENCY ACCEPTANCE" Pg. 4-14, lines 10-11:

"Local agencies have also expressed concern about the health risks at the levee."

Comment

The unidentified "local agencies" and the nature of their "expressed concerns" should be identified in the OUFS, and opportunity to address their concerns should be permitted. Failure to identify them, and to permit comment, denies procedural due process to the PRPs.

167

Section 4 "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES"

"COMMUNITY ACCEPTANCE" Pg. 4-19. line 14:

"The soil cover alternative should be acceptable to the majority of the community."

Comment

The City is most concerned that the opinions of the community be considered.

Documentation of public meetings in which such opinions were expressed should be provided.

168

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

"DISCUSSION AND CONCLUSIONS" Pg. B-19, lines 34-37:

> "Although Alviso air contains 10 to 1000 times more fibers per cubic meter than control area air (which also contains detectable fibers), the levels are more than a thousand times below occupational standards and thus would not constitute an alarming exposure."

Comment

This statement should be considered with the statement in the April 28, 1988 supplemental sheet that "the levels of ambient airborne asbestos in the community at present do not appear to differ significantly from other nearby communities." These statements suggest that selection of a "remedy" before full evaluation of necessity and appropriateness of the remedy has been evaluated would be premature.

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

Pg. 1-2, line 13:

" o Health criteria are developed for exposure to asbestos via inhalation based on a recent Airborne Asbestos Health Assessment Update (EPA 1986). The major uncertainties associated with developing health criteria for exposure to asbestos via inhalation include: (1) uncertainty associated with extrapolation from high occupational levels to much lower ambient levels, (2) difficulties associated with converting between results of different methods of measurement, and (3) questions involving the relevance of extrapolating dose-response data that may be based on different mineralogic and physical forms."

Comment

The quote demonstrates, in EPA's own language, that "major uncertainties" continue to exist with respect to health criteria for exposure to asbestos via inhalation. As that is the case, and as "the levels of ambient airborne asbestos in the community at present do not appear to differ significantly from other nearby communities" (OUFS Supplemental sheet, April 28, 1988) it is suggested that selection of a permanent remedy be made at the earliest appropriate time, i.e., as soon as the "major uncertainties" are resolved. The City urges the EPA to take prompt action to resolve the "major uncertainties" and to make its selection, once the "major uncertainties" are resolved.

Appendix B, "TOXICITY PROFILE FOR ASBESTOS" Section 2.0

"INTRODUCTION" Pg. 2-1 line 32, and Pg. 2-2, lines 1-2:

"However, asbestosis is primarily observed in occupationally exposed individuals following long-term exposure to high levels of asbestos."

Comments:

The quoted language illustrates the need to closely examine the sweeping generalizations currently extant regarding asbestos. The statement that "asbestosis is primarily involved in occupationally exposed individuals following long-term exposure to high levels of asbestos" would seem to be more to the point. The Alviso Ring Levee does not involve a risk of long-term occupational exposure to high levels of asbestos, and must be evaluated differently.

171

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

Section 3 "INITIAL SCREENING OF REMEDIAL ACTIONS ALTERNATIVES" Pg. 3-5, line 7:

"...fine chrysotile fibers were not studied because they could not be measured...."

Comments:

The quoted language illustrates the points that not all "asbestos" studies are studies of the same fibers, and that results of a given study are not necessarily applicable to all forms of asbestos particularly chrysotile asbestos. For this reason, it is submitted that the health effects and exposure assumptions in the OUFS should be reevaluated, using studies specific to chrysotile.

172

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

Section 3 "INITIAL SCREENING OF REMEDIAL ACTIONS ALTERNATIVES" Pg. 3-6, line 13:
"The degradation of chrysotile is greatest,"

lines 18-19:

"It has been difficult to assign a scale of relative pathogenicity to various asbestos types."

lines 22-25:

"It has been suggested that chrysotile is less hazardous than other asbestos types. However, high rates of lung cancer in asbestos workers have been related to all types of asbestos including chrysotile (Dement 1982, 1983a,b, EPA 1986)."

Comments:

It is submitted that chrysotile's fiber size and degradation character, especially in nonoccupational settings are significant factors which merit closer attention. Moreover, that "high rates" in asbestos workers have been "related" to all types of asbestos, is not to say that much lower ambient airborne levels of chrysotile asbestos will also "relate" to "high rates" of any particular disease. The OUFS fails to make this important distinction.

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

Section 3 "INITIAL SCREENING OF REMEDIAL ACTIONS ALTERNATIVES" Pg. 3-7, lines 1-6:

"It should be emphasized that there is still considerable controversy as to whether or not crocidolite or other amphibole asbestos types are more carcinogenic than chrysotile (EPA 1986). Great Britain, Canada, and Sweden, for example, have imposed far more rigid standards for crocidolite than other varieties of asbestos. In contrast, the United States has no specific standard for any specific asbestos mineral."

lines 16-17:

"Unfortunately, the differential risk associated with different fiber types is still not completely understood (EPA 1986)."

Comments:

To impose enormously expensive requirements which purport to solve a problem allegedly created by a naturally occurring substance found in rocks and soil in its natural state in widespread areas, before the "considerable controversy" is resolved, and the differential risks are understood, is to act on the basis of insufficient information. In this setting, remedial orders would be arbitrary and capricious.

Appendix B, "TOXICITY PROFILE FOR ASBESTOS

Section 4 "DESCRIPTION OF HEALTH EFFECTS IN HUMANS

Section 4.1 "Carcinogenic effects" Pg. 4-1, lines 5-8:

"The carcinogenicity of asbestos following ingestion has not been conclusively established; however there is available data from occupational studies that suggest a link between inhalation and subsequent ingestion of asbestos and gastrointestinal cancer."

lines 23-28:

"A limited number of studies have suggested a possible association between increased incidence of human cancers and exposure to asbestos in nonoccupational settings. These studies have examined the occurrence of asbestos-related disease among family contacts of asbestos workers, residents living in the vicinity of asbestos facilities or other sources of ambient asbestos,..."

lines 29-30 and page 4-2, lines 1-2.

"However, these types of associations have not been extensively studied, and in many cases, results of the studies are inconclusive or equivocal. Furthermore, exposure data often are incomplete or lacking."

Comments:

The quoted language illustrates the limitations of the data available. Moreover, Alviso is a nonoccupational setting "where the levels of ambient airborne asbestos in the community at present do not appear to differ significantly from other nearby communities." (OUFS supplemental sheet, April 28, 1988). To order remedial action before the OUFS contains data adequate to justify the remedial action contemplated would be to act on "inconclusive or equivocal" data. Given these limitations, and the limited, inconclusive, equivocal information presented in the OUFS, a decision based on the OUFS would be arbitrary and capricious.

Appendix B, "TOXICITY PROFILE FOR ASBESTOS

"Section 4, "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES" Pg. 4-2, line 1:

"...results of the [nonoccupational] studies are inconclusive or equivocal. Furthermore, exposure data often are incomplete or lacking."

Comments:

The quoted language again illustrates that the nonoccupational studies are "inconclusive of equivocal." Selection of a permanent remedy should be based on conclusive, unequivocal studies, and it is suggested that the selection process include such studies.

176

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

Section 4 "DETAILED ANALYSIS OF SELECTED REMEDIAL ACTIONS ALTERNATIVES"

Section "ANALYSIS OF NO ACTION ALTERNATIVE" Pg. 4-7, lines 24-25:

"Epidemiological data suggest that occupational exposure to amphiboles may be associated with a greater risk of mesothelioma than is exposure to chrysotile."

Comments:

This language, too, illustrates that different forms of asbestos may well carry different risks. We also note that chrysotile seems to be associated with the lowest risks.

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

Section 4.0 "DESCRIPTION OF HEALTH EFFECTS OF ASBESTOS" Pg 4-8, lines 5-7:
"However, chrysotile is more vulnerable to acid and shows a tendency to split into smaller fibers or to dissolve in the lung (Morgan and Seaton 1984)."

lines 24-25:

"Information concerning the occurrence of asbestos-related disease among persons not directly exposed at the workplace is limited."

Comments:

The comment as to the vulnerability of chrysotile (to dissolve in acid, to split into smaller fibers, or to dissolve in the lung) indicates that the risks of chrysotile exposure may well be lower than for other forms of asbestos.

In addition, the "limited" information as to the occurrence of asbestos-related diseases among persons not directly exposed at the work place" suggests that additional information should be obtained as soon as possible. As soon as it becomes available, but not before, EPA should select a remedy, based on that information.

178

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

"DOSE-RESPONSE ASSESSMENT" Pg. 6-6, lines 11-12:

"The risks shown in Table 6-1 are best estimates for inhalation exposure to fibers released from a variety of asbestos products used in the United States."

lines 17-18:

"In some pure chrysotile exposure circumstances (e.g., mining and milling), the risk may be overestimated."

Comment

Again it appears that the generalized statements in the OUFS as to the risks posed by asbestos may not apply to the risk posed by the naturally occurring chrysotile asbestos in the levee. There is a differential, and it should be taken into account that a policy which fails to consider the differences in the risks is deficient. For that reason, the OUFS is inadequate, as this differential has not been addressed.

Appendix B, "TOXICITY PROFILE FOR ASBESTOS"

Section 7, "SUMMARY OF CRITERIA" Pg. 7-1, lines 8-13 and 19-20:

"The criteria for exposure by inhalation to asbestos in ambient air shown in Table 7-1 are expressed in terms of PCM fibers per ml (i.e., fibers 5 microns in length, aspect ratios 3.1). These limitations are required primarily because the majority of available studies on which the criteria are based employed PCM analytical techniques. Thus, individual asbestos minerals could not be distinguished and were not considered separately."

"Asbestos counts, even when limited to the fraction greater than 5 microns, differ widely between PCM and TEM."

Comment

The blanket indictment of asbestos is not completely justified. EPA should attempt to conduct studies evaluating the individual asbestos materials. Only when this is done can the OUFS serve as a basis for rational decision.

180

Appendix C "WETLANDS MITIGATION PLAN"

Pg. C-1, lines 13-18:

> "This policy requires that where impacts to the wetlands are unavoidable, land must be provided to offset or compensate for those impacts. At Alviso, this means that wetlands must be identified to offset the loss of approximately 8 acres of land to the levee and the additional land lost due to the levee remediation.

Comment

If the U.S. Fish and Wildlife Service's mitigation policy is to be observed, the specific statutory basis, and all relevant implementing regulations, should be presented as a cornerstone of the policy. A reference to "policy" without providing specific authority as the basis of the policy, is an inadequate foundation for exactions. Citation to "policy" without citing authority, requires commenters to engage in speculation as to the basis for the "policy," and denies them the opportunity to effectively challenge the policy. Moreover, to the extent that the creation of new wetlands is contemplated as a remedial requirement, the U.S. Fish and Wildlife Service should be required to present evidence that "conversion-into-wetlands" projects are effective, and that the uplands loss is justified. The OUFS fails to address these points. Until it does, it is deficient. Moreover, as pointed out earlier, the cited amount of lost wetlands, 8 acres, conflicts with a COE estimate of 4.2 acres lost by construction of the levee.

Comments Submitted by

State and Federal Agencies

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Division of Ecological Services
2800 Cottage Way, Rm.E-1803
Sacramento, California 95825

May 10, 1988

Ms. Nancy Woo
Program Manager - South Bay Asbestos Site
U.S. Environmental Protection Agency, Region IX
215 Fremont Street
San Francisco, California 94105

Subject: South Bay Asbestos Site Interim Clean-up Action - Operable Unit Feasibility Study

Dear Ms. Woo:

It is our understanding that the Environmental Protection Agency is proposing a permanent solution to asbestos contamination resulting from the unauthorized Alviso Ring Levee as noted in the informational flier accompanying the feasibility document. Our earlier comments addressed interim clean-up proposals.

We are concerned about statements regarding the future of the unauthorized fill made in the document and the failure of this effort to provide mitigation to offset watland losses incurred by placement of the unauthorized fill placed in 1983 or the clean-up efforts. We are also concerned about the use of any draft technical information pertaining to mitigation that we provided earlier for the temporary solution proposed by the Environmental Protection Agency - the emergency soil capping alternative.

On page 3-15 the discussion of the off-site containment alternative contains the sentence stating that "After the levee is removed and replaced, the levee would have restricted use." This statement implies that replacement of the unauthorized levee is a foregone conclusion. It is not. The asbestos clean-up program does not take the place of the public interest review process required in the Corps of Engineers regulatory program.

On page 4-5 the document references the Service's Mitigation Policy and states that our mitigation goal for wetlands is no net loss of in-kind habitat values. This is incorrect. Our mitigation goal is no net loss of in-kind wetland acreage or value (April 17, 1987 letter in Appendix C).

AIR DIVISION
U.S. EPA, REGION 9

MAY 12 1988

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The Service previously provided comments and technical information on interim clean-up proposals. We recommended that removal of the unauthorized fill and restoration of wetland values to the area covered by the fill is the preferable solution from a fish and wildlife standpoint. In addition, we recommended that mitigation be provided to offset the interim loss of wetland values for the period the unauthorized fill was in place. We continue to recommend removal of the material and restoration of wetland values and the provision of mitigation for the loss of wildlife values that has occurred to date. We also maintain that it is necessary for the Environmental Protection Agency to initiate consultation under the auspices of Section 7 of the Endangered Species Act.

If you have any questions about these response, please contact Don Palawski or Peggie Kohl at (916) 978-4613. If you have any questions on endangered species issues, contact Peter Sorensen at (916) 978-4866.

Sincerely yours,

James J McK

James J. McKevitt
Field Supervisor

cc: Reg. Dir., (AFWE), FWS, Portland, OR
Dir., CDFG, Sacramento, CA
DOI, San Francisco (Attn: Pat Port)
COE, San Francisco District, San Francisco
Reg. Mgr., CDFG, Reg. III, Yountville
DOI, Solicitor, San Francisco
SESO, Sacramento

State of California
GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

GEORGE DEUKMEJIAN
GOVERNOR

(916) 323-7480

DATE: May 25, 1988

TO: Ms. Nancy Woo
Environmental Protection Agency
215 Fremont Street (T-4-3)
San Francisco, CA 94105

FROM: Office of Planning and Research
State Clearinghouse

RE: SCH 88042901---Feasibility Study, South Bay Asbestos Site, Ring Levee Operable Unit, Santa Clara County.

As the designated California Single Point of Contact, pursuant to Executive Order 12372, the Office of Planning and Research transmits attached comments as the State Process Recommendation.

This recommendation is a consensus; no opposing comments have been received. Initiation of the "accommodate or explain" response by your agency is, therefore, in effect.

Sincerely,

Ben A. Williams
Interim Director

Attachment

cc: Applicant

Resources Building
1416 Ninth Street
95814
(916) 445-5656
TDD (916) 324-0804

lifornia Conservation Corps
Department of Boating and Waterways
Department of Conservation
Department of Fish and Game
Department of Forestry
Department of Parks and Recreation
Department of Water Resources

GEORGE DEUKMEJIAN
GOVERNOR OF
CALIFORNIA

THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

Air Resources Board
California Coastal Commission
California Tahoe Conservancy
California Waste Management Board
Colorado River Board
Energy Resources Conservation And Development Commission
San Francisco Bay Conservation and Development Commission
State Coastal Conservancy
State Lands Division
State Reclamation Board
State Water Resources Control Board
Regional Water Quality Control Boards

Ms. Nancy Woo
Environmental Protection Agency
215 Fremont Street (T-4-3)
San Francisco, CA 94105

May 25, 1988

Dear Ms. Woo:

The State has reviewed the Feasibility Study, South Bay Asbestos Site, Ring Levee Operable Unit, Santa Clara County, submitted through the Office of Planning and Research.

We coordinated review of this document with the Air Resources Board, Waste Management Board, San Francisco Bay Regional Water Quality Control Board, and the Departments of Fish and Game, Health Services, Parks and Recreation, Transportation, and Water Resources.

The Department of Fish and Game and the San Francisco Bay Regional Water Quality Control Board have prepared the attached comments for your consideration.

Because properly packaged asbestos can be disposed in non-hazardous landfills, the Waste Management Board would like to comment on any landfilling remedy that may be imposed if the preferred alternatives are not implemented. Any questions regarding these comments should be directed to Michael Leaon of the Board's Local Planning Division at (916) 322-2674.

Thank you for providing an opportunity to review this document.

Sincerely,

Gordon F. Snow, Ph.D
Assistant Secretary for Resources

Attachments (2)

cc: Office of Planning and Research
(SCH 88042901)

State of California

The Resources Agency

Memorandum

To : The Honorable Gordon K. Van Vleck
Secretary for Resources
1416 Ninth Street
Sacramento, CA 95814

Attn: Gordon F. Snow, Ph. D
Projects Coordinator

Date : May 25, 1988

From : Department of Fish and Game

Subject : South Bay Asbestos Site, Ring Levee Operable Unit Feasibility Study, City of Alviso, Santa Clara County, SCH #88042901

Department of Fish and Game (Department) personnel have reviewed the Operable Unit Feasibility Study South Bay Asbestos Site Interim Ring Levee, City of Alviso, Santa Clara County, SCH #88042901. The study examines alternatives for remedying the unauthorized placement of asbestos-contaminated fill by the City of San Jose to create a levee around Alviso following flooding in 1983. The placement of the levee resulted in the loss of approximately 4.2 acres of seasonal wetlands and transitional habitat. Capping of the interim levee would result in the loss of an additional 4 acres of wetlands.

It is the Department's policy that no project should result in a net loss of either wetland acreage or wetland habitat value. Any action taken to remedy the problems created by the interim levee should incorporate measures to offset the loss of wetlands from both the initial placement of the interim levees and any loss of wetlands which result from the corrective action. In addition, compensation should be provided for the loss of habitat values incurred since the interim levee was constructed. Because of the asbestos-contaminated nature of the dike and the fact that it was constructed without benefit of a Corps permit or any other public review process, we recommend removal of the dike and restoration of the impacted site to preproject conditions. Further, a means of compensating for the temporary loss of wetland habitat values since the dike was constructed should be developed in consultation with the Department and the U. S. Fish and Wildlife Service. Should the City of Alviso and/or the County of Santa Clara elect to construct a dike composed of nontoxic material, then such a project should be subject to the same public review criteria as any other similar project pursuant to the requirements of the California Environmental Quality Act, the National Environmental Policy Act, and the Corps of Engineers Section 404 permit program.

Questions concerning our comments should be directed to Carl Wilcox, Associate Wildlife Biologist; or Theodore Wooster, Environmental Services Supervisor, at (707) 944-5500.

Pete Bontadelli

Pete Bontadelli
Director

cc: Peggy Kohl, U. S. Fish and Wildlife Service
Corps of Engineers, San Francisco District

STATE OF CALIFORNIA GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
1111 JACKSON STREET, ROOM 6040
OAKLAND 94607

Phone: Area Code 415
464-1255

May 13, 1988
File No. 2188.05mad

Mr. Glenn Stober
State Clearinghouse
1400 Tenth Street Rm. 121
Sacramento, CA 95814

Dear Mr. Stober,

Subject: South Bay Asbestos Site, Ring Levee Operable Unit Feasibility Study, SCH# 88042901 Alviso, Santa Clara County

This document evaluates alternatives for remedial action at the interim ring levee, part of the South Bay Asbestos CERCLA Superfund site in Alviso, California.

We have reviewed the subject document and we have the following comments.

(1) The Regional Board's Basin Plan requires that any application for proposed fill activity within its regulatory jurisdiction include mitigation located within the same section of the Region, wherever possible, so that there will be no net loss of wetland acreage and no net loss of wetland value when the project and the mitigation lands are evaluated together. Since this project will result in a loss of wetland value, the Regional Board will require mitigation.

(2) Section 404 of the Clean Water Act requires a permit from the U. S. Army Corps of Engineers prior to the discharge of fill material to waters of the United States. Under Section 401 of the Clean Water Act, the Regional Board must certify that Section 404 permits issued by the Corps comply with water quality standards established by the State.

(3) We have questions as to the impacts of this project on water quality in the New Chicago Marsh. We would like to review management plans for this area.

Thank you for providing this opportunity to comment. If you have any questions, you can contact me at (415) 464-4268.

Sincerely,

for

Steven G. Eberl
Water Resource Control Engineer

18

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MAY 17 1988
STATE CLEARINGHOUSE

Comments Submitted by

Other Interested Parties

May 25, 1988

Ms Nancy Woo
Remedial Project Manger
U.S. Environmental Protection Agency
215 Fremont Street (T-4-3)
San Francisco, CA 94105

Re: South Bay Asbestos Superfund Site

Over the five years since asbestos was discovered in the Alviso Ring Levee we have been presented with numerous reports and attended many meetings. It is somewhat disconcerting that so much discussion and so little action has resulted. As frustration levels in the community have increased, attendance at your meetings and reiteration of our preferences has decreased.

Nevertheless, the data supports our original positions on the various options, and our positions have solidified. Of the five alternatives presented we wish to make comments on each, and then state a preference by the order in which we comment. From worst to best they are as follows:

> Option 1: No Action. This is clearly unacceptable as it does not solve the now-proven health risk problem. It is, unfortunately, the option which is now in place through the inaction of the City of San Jose, the Santa Clara County Water District, the State of California Department of Health Services, and the U.S. Environmental Protection Agency. It is imperative that this paralysis of inaction be cured, and this option be eliminated.
>
> Option 3: The Gunite Cover. This option has inherent disadvantages. This first is that the asbestos material will still be present. Leakage and cover deterioration will allow asbestos to "escape" from under the cover, exacerbating structural weakness and so, again, allow further leakage. The second problem is aesthetic. The "ring wall" will attract graffiti. With or without this "public art", the wall will be ugly, and detract from property values. In addition, the lack of vegetative cover will no doubt present serious problems for the surrounding areas of abundant but threatened wildlife. This is not an acceptable alternative.

Option 4: Combination soil and gunite While this option is not as bad as option 3, it does, in the gunited areas, present the same disadvantages. This is made worse by the placement of the gunite areas in the most visible areas of the community. The result is an unacceptable alternative.

Option 2: Soil cover. If installed and planted correctly, this could be an attractive improvement to the existing Ring Levee. If the design is what the engineers assume, this more flexible cover should contain the asbestos bearing material. The questions that disturb us are: Can such a cover be installed correctly? And how durable will the cover be? If the design is correct, the installation correct, and there is no wear, then this is a good option. The necessary assumptions are questionable, however.

Option 5: Removal and replacement. Oddly, this was the original option requested by the community half a decade ago. It was not proposed at that time because of the risk of exposure to dust during removal. That short term problem no longer seems relevant after years of low level exposure. The long term risks would be completely removed. This will result in considerable peace of mind in the community and a clear end to the problem. The new ring levee can be constructed in the proper locations (on easements and outside of the Wildlife Refuge), and to the same aesthetic and environmental standards as the soil-cover option, and no longer has to be taller than required for basic flood protection. This is by far the most preferable of the options presented.

It must be noted that, while this option was brought up by a member of the community, it was not, as you stated in your announcement for the extended comment period, announced as an alternative by EPA. It has long been considered and presented, but was conspicuous by absence from your presentation at the April 28, 1988 meeting.

It is our strong preference that Option 5 be implemented. Option 2 appears acceptable, but does not appear to be reliable. Options 1, 3, and 4 are not acceptable, and will be strongly opposed.

We remain concerned that the inertia of inaction will prevail, and that the funding available will all be spent on studies and meetings and analysis. While we agree that incautious action has placed us all in this situation, and that discussion is necessary before action, there must be action taken in order for the problem to be rectified.

Five years of consistent test results and expressions of preference by the community seem to be sufficient to demonstrate the correct course of action. We urge you to take action - removing the contamination and replacing the levee - immediately.

Patiently your,

Sharon Rice

Craig Parada and Sharon Rice
1450 Wabash Street
P.O. Box 377
Alviso, CA 95002

cc: U.S. Senator Alan Cranston
U.S. Senator Pete Wilson
U.S. Represenatative Don Edwards
California Senator Alfred E. Alquist
California Assemblyman John Vasoncellos
San Jose Councilwoman Shirley Lewis

(announcement attached)

SOUTH BAY ASBESTOS SUPERFUND SITE
Alviso, California
May 11, 1988

EPA ANNOUNCES ADDITIONAL ALTERNATIVE BEING CONSIDERED FOR CLEANING UP THE RING LEVEE AND EXTENDS PUBLIC COMMENT PERIOD ON STUDY UNTIL MAY 25th

As you know, the U.S. Environmental Protection Agency (EPA) released the "Operable Unit Feasibility Study" for the South Bay Asbestos Superfund Site on April 12, 1988 for public comment. The Feasibility Study evaluates alternatives for addressing the ring levee contamination in Alviso. The four alternatives considered in detail for the ring levee are: (1) No action; (2) Covering the ring levee with a soil cover; (3) Covering the ring levee with a gunite cover; and (4) Covering the ring levee with a combination of soil and gunite cover. This fourth alternative is EPA's preferred alternative.

At a community meeting held in Alviso on April 28th, 1988, EPA announced that there is a fifth cleanup alternative that came into consideration after releasing this report. This alternative involves removing asbestos-contaminated fill from the old levee and replacing it with clean fill to form a new levee. This alternative was ruled out as a viable alternative in the Feasibility Study due to the high cost involved if EPA conducted the action. Recently, however, two of the parties who are potentially responsible for the contamination at the levee have indicated the possibility of their conducting this levee removal and replacement. Because the four alternatives that we looked at in detail did not include this alternative and therefore was not put forth as an alternative on which we asked for your comment, EPA decided to extend the comment period by two weeks and to solicit your input on this fifth alternative, as well as the other four.

The Operable Unit Feasibility Study is available for your review at the two Information Repositories listed on page 2; an April 1988 fact sheet summarizing this study is also available at these locations.

EXTENDED COMMENT PERIOD : May 11th to May 25th

EPA has already received some comments on the Feasibility Study. These include comments made at the April 28th community meeting. To ensure that all interested parties have a chance to comment on the four alternatives initially considered, as well as on the new fifth alternative, the public comment period has been extended for two weeks from May 11th to May 25th. This extension is not expected to delay site cleanup activities.

Written comments on the study and on all the alternatives should be submitted to:

Nancy Woo
Remedial Project Manager
U.S. Environmental Protection Agency
215 Fremont Street (T-4-3)
San Francisco, CA 94105

EPA will consider all comments received during the comment period when selecting a final cleanup plan for the ring levee contamination.

ROBERT W. GROSS
THE MUDFLAT REFUGE

CABLE
408 263-4170 USA

908 ELIZABETH STREET
ALVISO, CA. 95002

MEMO

April 28, 1988

TO: EPA

RE: U.S.EPA CONTRACT NO. 68-01-6939
Alviso Ring Levee - City of San Jose, CA.

Comments on your report:

I. Who has the final authority over the abestos problem in Alviso?

II. Who will be held accountable for past, present and future impacts to the community and to private property?
1. The financial impacts to realty values?
2. Construction impacts or restraints to property?
3. Cost to remove the hazardous waste off private property?
4. Reference as to who will be responsible on private property if future mitigation is required?

III. What are the long range obligations of EPA and City of San Jose to the community and to private property?

IV. Page 1-2 notable flood dates should have included 1982, Alviso was flooded from storm waters from the same source as in 1983 - Coyote Creek.

V. Page 4-2 & 4-3 Land values, "fair market value", this is totally incorrect as to land prices, I suggest someone with more expertise investigate this, your dollar figures may be attractive to EPA or San Jose, but does not represent marketing conditions of the area.

VI. The community feel and it is general opinion that more attention is given to fish and wildlife and little concern to humans.

VII. The source where said materials came from, what is the position of the EPA and the City of San Jose on mitigating the open pit operations of those sites or are they being ignored by both agencies?

Brenda Monroe
Post Office Box 82
1385 State Street
Alviso, California 95002
(408) 263-8871

May 2, 1988

U.S. Environmental Protection Agency
Attention: Nancy Woo
Remedial Project Manager
215 Fremont Street
San Francisco, California 94105

E.P.A.,

I am very upset about this whole asbestos scare in Alviso. I have many questions:

- **Who discovered and reported the asbestos content in the dirt?**

- **Why did the City of San Jose instruct the trucking company who hauled the dirt to get the dirt from a pit that is "known" to have asbestos laden dirt, even though there are pits closer to Alviso with "clean" dirt?**

- **Why does the city allow that pit with asbestos laden dirt to remain open and doing business if the dirt is so toxic?**

- **Why was it reported to the media that Alviso is one of the most toxic sites in California because of the levee with asbestos in it, when the pit where the levee dirt came from is worked every day with heavy equipment and has one thousand times more dirt which is tossed about in the air instead of just sitting there levee-like?**

- Why didn't the city get the damn dirt out of Alviso as soon as they found out what they had done?

- Why is so much tax payer's money being spent on project managers and community relations coordinators, and time wasted while little kids whose parents can't read may be playing on that levee that is supposed to be so toxic?

- Isn't it so that much of the dirt in this valley and up the peninsula has asbestos in it?

- Aren't trucks hauling asbestos laden dirt from a future freeway site in San Jose, without tarps, to the same pit that provided the dirt for the Alviso ring levee?

- What is going on?

These community meetings and newsletters seem like some kind of a smoke screen to cover up what really is going on.

Brenda Monroe

Brenda Monroe
A Concerned Citizen

May 4, 1988

Nancy Woo
Remedial Project Manager
U. S. Environmental Protection Agency
215 Fremont St.
San Francisco, CA 94105

RE: EPA - MEETING OF 4-28-88
Clean up Actions for Asbetos Contamination at Alviso, California

Nancy;

These are my comments and concerns regarding above;

I. LEVEE

A. I am wondering if the easements needed to obtain access for clean-up may still be in effect since levee was built in 1983, only five years ago. Why do the easements cost so much? On our property close to Sacramento, ATT wanted to pay us only $.50 per foot for a 20 foot easement onto our land.

B. What would action be if levee needed emergency repair or we had another major flood? Couldn't EPA just go onto the property to secure "environmental protection" and what makes this different? Isn't there a health problem now that would be considered an emergency situation for the environment - for US!! ?

EPA says it has no authority or power to do anything by itself so if I brought home a fuel rod from a nuclear power plant, (Uranium 222), you're telling me you wouldn't have someone remove it immediately? I think this problem with the asbetos is just as important.

II. HEALTH

A. I request that Medical studies of this area are started.

1. Who can I contact to request this?

2. Are there are any other problems with water or other harmful materials found in this area?

B. At the meeting, several people were concerned about the dust control problem from the trucking lots...
I am from Iowa and if a person lives on a gravel or dirt road

to control dust kicked up by tractors, trucks and other vehicles we use oil. Couldn't a coat be put on the dirt parking lots? I can't see the good watering the streets and lots [illegible] In a half an hour during the summer that water would have dried up and the problem would still be there!! It's a waste of time and water.

1. What is the possibility of getting the truck yards to pave their lots? Are there any legal procedures a town could go through to try to pass some control over this?

III. SUMMERSET MOBILE HOME PARK

A. Please contact owner of land park is on to see if you can test for asbestos or provide me with his/her phone number and address so I can contact directly.

B. Contact person who owns property directly in front of the mobile home park, where trucks are dumping rocks from some quarry.

C. While walking, we seen yellow flags warning about asbestos at Summerset's front drive way - on both sides (toward vacant lot and toward Guadalupe River)

1. Please check for these flags and see what the testing was when these flags were put up.

2. When were the flags put there?

3. The area toward Guadalupe River must be county owned, so you should be able to check there without having to get permission.

IV. SOIL COVER

A. If above is used to correct situation, what erosion problems can you forsee?

B. Has this alternative been used elsewhere for same problem?

I still don't understand why this matter is taking so long! Your sheet of 4-28-88, Operable Unit Feasibility Study, South Bay Asbetos Area Superfund Site, Alviso, California states "A numeric risk characterization is not necessay for EPA to proceed with clean-up actions at this site because of the documented hazardous propensities of asbestos, the documented existence of asbetos in the study area, and the documented potential for release of that asbetos into the air", yet you are still testing the soil to see what you come up with.

JUST HOW BAD IS THIS --- WILL WE EVER REALLY KNOW!!

Waiting for your response and your action.

Very truly yours,

Diane K. Hein

Diane K. Hein
P.O. Box 604
Summerset Mobile Home Park # 303
Alviso, CA 95002

Work # 408/739-0934 X 207
Home # 408/945-8866

FHFA

FAMILY HEALTH FOUNDATION OF ALVISO, INC.

Corporate Office & Alviso Health Center
1621 Gold Street, Alviso, CA 95002 • (408) 262-7944

Almaden Health Center
[illegible]

CompreCare Health Center
2400 Alum Rock Avenue
San Jose, CA 95116
[illegible]

Health Plan Plus
[illegible]

Julian Health Center
[illegible]

St. James Health Center
[illegible]

Proyecto Primavera
814 Tully Road
San Jose, CA 95111
[illegible]

May 25, 1988

Nancy Woo
Remedical Project Manager
U.S. Environmental Protection Agency
215 Fremont Street (T-4-3)
San Francisco, CA 94105

Dear Ms. Woo:

I am writing regarding the alternatives being considered for cleaning up the Alviso levee that is contaminated by asbestos.

The contaminated levees are not only an environmental hazard they are also a prodigious architectural (though necessary) monstrosity.

Our organization is a long-time Alviso based community health center (founded in 1967) that has invested inordinate level of time, resources, and services to the community and obviously have a vested interest in not only the community's infrastructure but also it's future.

We wholeheartedly support the EPA levee asbestos clean up campaign of removing this serious health hazard, and urge that this go forward expeditiously. Procrastinations have for too long hindered resolving this environmental nightmare.

We urge an asbestos clean up effort that will also include making the levees less obtrusive and hideous.

We urge the complete removal of asbestos contaminated fill and a replacement of clean fill to form a new levee. Furthermore, we urge that the "new levee" be landscaped with trees and other greenery with walking scenic trails, rest areas, and proper paving and drainage in order to prevent mud run-off during the raining season. We think that these improvements will screen the obtrusion of the levees and provide an opportunity for the Alviso and other south bay residents to enjoy some of the unique characteristics of our community. Thank you.

Sincerely,

Roy Jimenez

Roy Jimenez
Vice President, Capitated Health Systems

RJ:ic

Question and Answer Period of the

April 28, 1988 Public Meeting

(Pages 30 through 66 of the Meeting Transcript)

we let Juliana catch her breath and Jill can catch her fingers. So, we'll reconvene, then.

(Recess)

CHAIRMAN CLIFFORD: I think we should get back into this and see if we can answer your questions and listen to your comments. So, if everybody could take a seat, maybe we can get started again. Juliana, are you ready? We might not need this, but I'll keep it on, just in case. Okay, it's now open for questions. Who wants us to answer the first question?

MR. GROSS: I'll kick it off. Bob Gross, for the record. I better give you a written comment covering some of these issues here, but I'd like to point out, I don't know who did your land value and marketing research in your study, but he must have been smoking marijuana because you show, in your comparables, that a home here may be worth $24,000.00, based on your report. I find that, you know, I really find that maybe it's acceptable to EPA and the City of San Jose, but not to people who own property here.

Another thing is, I'd like to know who is going to be held accountable for this so called, "asbestos", quote, unquote, in the ring levy that's on private property?

CHAIRMAN CLIFFORD: Is that a question?

MR. GROSS: That's a question.

CHAIRMAN CLIFFORD: Okay, the question is, who is responsible for the portions of the ring levee that are on private property?

MR. GROSS: Right, and to follow up with that, my question is, who is going to do to the impact on that real estate? For example, today in the Mercury News, the Mercury News, this morning, they got a deal here how asbestos devalues properties. Who is going to be held accountable for that?

CHAIRMAN CLIFFORD: As far as we're concerned, we're responsible for dealing with and making sure that the asbestos in those portions of the ring levee on private property are controlled.

MR. GROSS: Okay, are you telling me that if you come in and cap that on private property and I have a building that's going to be constructed there, I can not break that seal, and then am I going to be held accountable for the asbestos that is air borne as a result of that?

CHAIRMAN CLIFFORD: No, we're not going to tell you that you can't break the cover.

MR. GROSS: You didn't answer my question. Am I going to be held accountable if I break that seal?

CHAIRMAN CLIFFORD: Yes.

MR. GROSS: But you're on my land and you didn't have the authority to come on there. I just suggest this and I'm going to tell you the general opinion of the people here in Alviso: Get the damn thing out.

CHAIRMAN CLIFFORD: For those other people who have portions of the ring levee on their property that we're going to be seeking easements for, as the owner of that property, you are responsible for that on your property.

MR. GROSS: Not if we didn't put it there.

CHAIRMAN CLIFFORD: That's --

MR. GROSS: Bullshit.

CHAIRMAN CLIFFORD: That doesn't mean you're the only person responsible.

MR. GROSS: I know it. I'm speaking for a lot of other people tonight. We didn't put it there.

CHAIRMAN CLIFFORD: We know you didn't put it there.

MR. GROSS: Okay.

CHAIRMAN CLIFFORD: We know who did put it there. I think we all know that the City of San Jose is responsible for putting that serpentine rock and soil on whosever property it happens to be on. We also know that easements weren't necessarily obtained in all cases. So, we know -- EPA is not an agency that assigns liability. We identify those responsible parties who might be potentially responsible, but it's a court that actually makes a decision as to who's liable. All I can say is, if you own property that has hazardous material on it, as an owner of that property, whether you put it on or not, you're considered potentially liable. We're not going to make the decision. The court will make that decision. That's not our decision.

Yes, sir? could you please state your name, for the record?

MR. SHOCKLEY: Dave Shockley. (phonetic) Why is it that this ring levee has got so much asbestos in it that I've hauled out of that pit down there, all over this valley and this is the only one that's getting goofed about it.

CHAIRMAN CLIFFORD: The question is, that this gentleman has hauled other truck loads of soil out of the same quarry, the Raisch Quarry, that the material from the Alviso ring levee was drawn from, and he's moved it to other places in the Santa Clara Valley besides the town of Alviso. Why are we just worried about Alviso and why aren't we dealing with the other portions, the way it's asked. The simple answer is that we know where it is in Alviso, but we don't know where else it is in the valley.

MR. SHOCKLEY: Come to me and I can take you to a lot of places.

CHAIRMAN CLIFFORD: This gentleman in the white had a question?

MR. ZANGER: No, I didn't have a question. I had a statement. Earl Zanger is the name. If you had a map of those locations, what would your actions be?

CHAIRMAN CLIFFORD: The question is, if we had a map of where the other soils from the quarry had been disposed, what would we do about it?

MR. ZANGER: Would they expand the site location?

CHAIRMAN CLIFFORD: No, we wouldn't expand the site location.

MR. ZANGER: The material is from the same source.

CHAIRMAN CLIFFORD: What we probably would do is ask the state or the city or the county to do some investigating of the different sites that the soil was disposed at and make an assessment to whether or not they thought any of those situations warranted EPA involvement. If they did, we would probably look into it. Yes?

MS. CARROT: Where is the site of the quarry?

CHAIRMAN CLIFFORD: The question is, where is the site of the quarry. I might look to Nancy to maybe point that out on the map. Can I get your name, please, for the record?

MS. CARROT: LaVonne Carrot. (phonetic)

CHAIRMAN CLIFFORD: We don't have a map that shows that?

MR. ZANGER: Give us the street, an area, where it is at, cross street, something.

CHAIRMAN CLIFFORD: Nancy?

MS. WOO: I can get the answer in a couple of minutes.

CHAIRMAN CLIFFORD: Okay, we'll get the answer. We don't have it at the tip of our tongue. Sir, do you know right offhand? Could you describe where it's at right now?

MR. SHOCKLEY: I want you guys to get it out.

MS CARROTT: I think they're on our side, not our enemies. They're trying to help out.

CHAIRMAN CLIFFORD: Thank you. Tom

MR. ARY: My name is Tom Ary. (phonetic) I'd like to ask about some of the alternatives. I agree, there are some basic problems you'll have to address as well, but on this gunite cover, it suggests that it would increase the flood function and erosion resistance to the levee. I wondered if it's only going to add two inches versus the soil cover, which is going to add eighteen, how that would reduce much in the way of a flood hazard. That's the first question. I got a couple.

CHAIRMAN CLIFFORD: The question, I believe, is, where we have proposed to put gunite, we are only looking at a two-inch increase in height?

MR. ARY: Yeah.

CHAIRMAN CLIFFORD: And how is that going to better fend off a flood or fend off a flood, as well as the eighteen-inch soil cover. Do you want to take a shot at this, Greg?

MR. BAKER: You're correct in pointing out that as far as the height of the flood, the gunite cover would not resist, say, a flood that was of a higher elevation than the existing ring levee. The point of that comment in the Feasibility Study is that the gunite material is more resistant to erosion.

MR. ARY: What kind of flow -- that's my second question, what kind of flow do you expect coming in across the flat lands of lower Santa Clara valley?

CHAIRMAN CLIFFORD: The thing is that there are portions of the ring levee that are enclosed. I think it's a point on the ring levee where they would want to reinforce them with gunite as opposed to soil, are those areas where there is a corner or bend that's considered to be more susceptible to erosion at the main face of the levee. Certainly, we're not talking about a river, we're talking about a sheet flow, title flow.

UNIDENTIFIED: During the '82 floods.

UNIDENTIFIED: I was here, tell me about it.

CHAIRMAN CLIFFORD: This is Sarah Black and she's a consultant working for us on this and she probably has more of the technical details. Sarah?

MS. BLACK: Well, the thought that we wre trying to convey was that, for instance, during the '83 flood the water depth was probably higher than your ring levee and the gunite would simply prevent erosion or washing as the water rose and washed over the levee.

UNIDENTIFIED: But if it washes over, then the levee isn't any good, anyway. So, what do you care about erosion? It's already no good. Aside from those little details, where are you going to put the gunite? In other words, I don't think the gunite is much improvement over soil, over most of the area and if the levee remains, I think most people would vote for soil cover throughout because you're only going to save, on a combination, you're going to save $7,000.00.

CHAIRMAN CLIFFORD: Yeah, I agree. In fact, what we would have liked to have done is -- and this is still up for discussion because we haven't' actually made a decision on this -- would be to use soil for, as much of it, if not all of it that we could. That's sort of -- we heard that in the past public meetings that that's what the community wanted and we think that's the way to go. There are some other constraints with certain portions of the ring levee that make it very difficult for us to use a soil cover in those areas. Greg, did you actually describe which areas? Do we know that the areas that are most likely to, that are most difficult to use soil at?

MS. WOO: These are the areas, right there, where we would have difficulty getting the large earth movers in. So, that's the area that we're thinking about gunite cover, but, you know, based on public comment, that may change.

UNIDENTIFIED: Excuse me, you're going to gunite in that spot? There's a lot of room to work there, and I'd like to point something out, as Doctor Harvey pointed out earlier. Those of us who were here in Alviso, if the ring levee was in position, the ring levee would be higher than the flood waters in 1983 -- I think they were lower, I'm sorry. The ring levee was at a higher elevation than the actual water. The ring levee is higher than the water that was in here. It would have protected us and another thing, too, when we talk about hydraulogy I think a real close analysis has to be made of that because the sheet flows came basically from this direction, here, and I agree with Doctor Harvey that if there is that much energy there, then you might as well kiss the whole thing goodbye. A little gunite isn't going to do a bit of good.

CHAIRMAN CLIFFORD: Bob, Nancy tells me this is something we didn't address quite fully and we're going to try and do that before you leave here tonight. The question earlier was, where is the Raisch Quarry, that this stuff came there. It's off Old Monterey road, near the fairgrounds and it's a part of Communication Hill. I don't know, I'm not that familiar with the San Jose area. I don't know where that is, exactly. If it would help to point that out on a piece of paper or a map for somebody, we should do that. So, if there are people, I can't remember who asked the question, but we could do that for you and if you leave your name and address, we could get that for you.

UNIDENTIFIED: Well, if this trailer court is put in on that old quarry, the quarry is closed down now, but the trailer court is put in there. How come they're not under asbestos deals?

CHAIRMAN CLIFFORD: There's a mobile home court?

UNIDENTIFIED: Mobile home court, yeah.

CHAIRMAN CLIFFORD: On the Raisch Quarry?

UNIDENTIFIED: Yeah. The quarry is closed down.

CHAIRMAN CLIFFORD: I thought there were two quarries. I thought the Raisch Quarry was still in operation. That's not true? Is the Raisch Quarry still in operation? Do we know?

MS. WOO: It is still in operation.

CHAIRMAN CLIFFORD: The Raisch Quarry is still in operation.

UNIDENTIFIED: Well, part of the quarry isn't, the part where that mobile home court is.

CHAIRMAN CLIFFORD: Well, actually, we don't know and we'll check into that.

MS. WOO: What we're concerned about today is the community of Alviso. If there are other sites out there, we'll take a look.

CHAIRMAN CLIFFORD: Is there anybody in the audience who happens to know whether or not it's the Raisch quarry that has the trailer park on top, as a pat of the quarry? Okay, no. We have been taking a lot of questions from those of you who speak English because I speak English and that's pretty easy. I'd like to ask, in particular, if there's anybody who has a head set on that would like to ask a question and if you would like to ask a question and if you would like to make a comment, if you'd raise your hand, we'll get the microphone to you and we'll get the translator and we can get a response to any questions you might have. Yes, sir, the gentleman in back? If you could please state your name before you ask a question, that would be appreciated.

(Translation)

CHAIRMAN CLIFFORD: Is the question, why is it taking us so long to put it -- okay, the question -- thank you sir. I think I understand. There are two questions. One is, in the past, other people have put, maybe the City of San Jose, the levee is there now, in a matter of seventy-two hours. Why is it taking us so long. That's a legitimate question.

(Applause)

CHAIRMAN CLIFFORD: If we could have simply made the decision to build another levee without doing the studying and without doing the analysis and without coordinating with all the agencies that we had to coordinate with, without presenting in the document that we should present to the community for public comment, we, too, probably could have been able to do it quite a bit quicker than we're taking now. Unfortunately, we have a very cumbersome process that we're forced to go through to make sure that we are making the right decision, that increasing the size of the levee is warranted, and to make sure that the design of the levee is going to be something that's acceptable to the community. That's why we've put together this document that's about three inches thick and it's taken us about a year and a half to complete. Frankly, I would have liked to have done something much quicker than this, too, myself.

Let's see, there was a second part of that question. In addition to why it took so long -- oh, the second question is, why can't we just dig it up and take it away, just as easy as we could build another levee on top of it. The problem we face with digging it up and taking it away is the cost of digging it up, the cost of disposing it in a commercial hazardous waste landfill that we would have to dispose of it because of the asbestos content.

UNIDENTIFIED: Where are you going to put it, if you move it?

CHAIRMAN CLIFFORD: And, where would we have to take it to in order to dispose of it, as this lady mentioned. Given those concerns, when we did our analysis on -- I can't remember, and maybe Nancy or Sarah could help me here --the cost of removing the levee was, I believe, around nine million dollars, nine or ten million dollars.

Yes, madam?

(Question; interpretation)

CHAIRMAN CLIFFORD: You didn't have any problems with floods before the ring levee was put there?

(Question; interpretation)

UNIDENTIFIED: It's been flooding since 1777, on the record in Alviso.

(Question; interpretation)

CHAIRMAN CLIFFORD: I'm not sure how I can respond to that. I think we have records that it actually had flooded several times prior to the flood of '83.

(Question; interpretation)

CHAIRMAN CLIFFORD: Do we have specific dates of floods since certain period of time?

(Question; interpretation)

CHAIRMAN CLIFFORD: I think what the gentleman just mentioned was that the floods came from the orchards side as opposed from the Bay side and from Anderson's Dam. Tom, being one of the ones that are probably more familiar with this, with the flooding here, is that your understanding of where the floods --

UNIDENTIFIED: People that have lived there for a long time know that it was flooded -- one of the levees were put along the Guadalupe and that got leveed again pretty well and the last one, the '83 was from the Coyote flood. When did it flood? Help me with the dates, '56 or somewhere? Those of you who have lived here longer. I mean, come on, Gross.

MR. GROSS: 1982 we took water here from Coyote Creek. Guadalupe was reconstructed over a period of years and water did come in here, but Coyote Creek flooded us in 1982 and 1983 and in '82 it over-topped behind Agnes State Hospital and over here by the Old Standish Ranch. In '83, it pretty well was contained behind the hospital and it came through on the Standish Ranch, back through the sewage treatment plant and into Alviso. That was March of '83. Again, I'd like the record corrected in your book; we did take water in 1982.

CHAIRMAN CLIFFORD: Thank you, Mr. Gross. I think that the specific years that the town of Alviso flooded is not one of the things that we're here to try to address.

We're not trying to rebuild the levee to fix whatever potential flooding might occur here. Our job here is to try to eliminate or reduce the risk of asbestos exposure, part of which is the result of that asbestos that is contained in a material the ring levee is now made of. That's why we've developed these options and that's what we'd like to hear your comments on. We do feel that something needs to be done with the ring levee and this is our proposal on the kinds of things that could be done to fix that problem.

Yes?

MS. HINES: Have any medical studies been done in this area?

CHAIRMAN CLIFFORD: Diane Hines, the question is, have any medical studies been done in the area and to my knowledge, there hasn't been any done on the Alviso population as it relates to asbestos. There was a question in the back? Yes, Jim?

UNIDENTIFIED: We talked earlier about from the very beginning, I was interested in what the problem might be. The community, from the very beginning, wasn't too hep on EPA entering here and that language complained about the dust from the trucks and all the stuff we've had to eat that was in the air from the dust that the trucks picked up. That problem, to this date, has not been corrected. Now, I heard from Ms. Woo, or one of the young ladies here, that the truckers have been taught to maybe water their lots down now and then. But that doesn't correct the problem. So, if you're here to correct something, why don't you correct it? The ring levee was something which was put in by the City, which is something, as far as I'm concerned, should be between you and the City and not the community because, evidently, we don't have anything to say about it, period. But, the dust, I think we should have something to say about because that affects us, directly, on a daily basis and nothing has been done, period, not anything has been done. Now, you've had plenty of time to do something about the dust.

CHAIRMAN CLIFFORD: I agree.

UNIDENTIFIED: Well, if you agree, why don't we do something?

CHAIRMAN CLIFFORD: I don't have a good answer for that, Jim. I know we actually committed to the past meetings, to deal with that truck yard dust issue. We haven't done it. I'm not exactly sure what that reason is. Do we have a reason?

UNIDENTIFIED: Can Ms. Woo comment on it a little bit? I think she was the one that mentioned that something should be said to the trucking people about the job.

MS. WOO: We have talked to the truck yard owner --

UNIDENTIFIED: What have you done?

MS. WOO: Okay, what we did was, we went in there and collected samples from the various truck yards along State Street. One of the problems we're having is actually analyzing for asbestos in the soil. It's incredibly difficult to get an accurate measure of the asbestos in soil. That's one of the problems we're having throughout the entire site. So, we had to re-analyze the asbestos samples collected from the truck yards, twice. Now that we have a positive identification of the asbestos concentration in the soil, that last month I sent out about six or seven letters, all to truck yard owners that had asbestos in their truck yards telling them the concentrations in the soil and suggesting that they water down their yards, periodically. Now, I know that's not very much, but it is our next area targeted for action.

UNIDENTIFIED: That doesn't make a whole lot of sense, with all the money you've been spending, and going through the whole program, as far as we've gone, it doesn't make any sense because that's something you could have taken care of, Jerry, you and your group, from day one. We don't have to wait this long to take care of the dust. If the asbestos is done, there's no problem, is that right? What is going on? Let's put the money to some use.

CHAIRMAN CLIFFORD: You've got a good point, Jim.

UNIDENTIFIED: I'm still breathing it, daily.

CHAIRMAN CLIFFORD: We committed to do something about the truck yards and we didn't. The reason we didn't is we haven't been able -- we don't have the authority, just because there's dust there, and order somebody to do something. We have to draw the connection between the amount of asbestos that's in the dust that's in the air, that's where we have the difficulty, on that connection. Let me just ask Nancy.

UNIDENTIFIED: Can the community help you to do something about that? We're here as a community, right?

CHAIRMAN CLIFFORD: Right.

UNIDENTIFIED: Can we get together and do something about it?

CHAIRMAN CLIFFORD; In terms of helping us get the information --

UNIDENTIFIED: Controlling the dust, controlling the dust and the asbestos in the air. I mean, we're here, all at once to contribute towards the one cause, right, keep asbestos down.

CHAIRMAN CLIFFORD: Yes.

UNIDENTIFIED: Can we do that?

CHAIRMAN CLIFFORD: I don't know. I don't have any ideas on how to -- we could help with the truck yards.

MS. WOO: Perhaps not with the truck yards, but the community, the residents along State Street can certainly hose down the dust along, right outside of their --

UNIDENTIFIED: We're suffering a water shortage right now. Do you want us to go out and blow the water? Let's put it together. Let's do it together.

CHAIRMAN CLIFFORD: Jim, we got to own up to this responsibility and we've not performed here and that's obvious. What I will commit to do is talk to our attornies to see if there's something other than the letter that we've sent suggesting they do something, that we can force the truck yards to deal with the dust problem. All I can say is I can't promise anything because I don't know from --

UNIDENTIFIED: Jerry, we don't want to wait until spring. I don't think I've missed very many meetings. I've been to virtually every one, and every time I've been here, we've talked about the same thing. It's not that big a deal to hold the dust down. It's not that big a problem.

CHAIRMAN CLIFFORD: You're right; it's not that big a problem. What's a problem is having the justification from a legal standpoint to force somebody to do something about it.

UNIDENTIFIED: You have the legal powers to come in here and get the community to show up time after time after time, but we really don't have a choice in what you're doing. So, we come here to find out just what's going on and we have no control over what you're doing. That's not right. Now, if you want the community to be part of what's going on, let us be part of it and you do something to help us.

CHAIRMAN CLIFFORD; I will get back to you in a week and let you know what we can do with the truck yards. I can't do any more than that right now because I haven't talked to my attorney.

UNIDENTIFIED: One week, huh?

CHAIRMAN CLIFFORD: One week. I'll let you know, in a week, what we're able to do.

UNIDENTIFIED: I hope you have a lot of power.

CHAIRMAN CLIFFORD: Well, the answer to that may be, we don't have enough information to take action against the truck yards.

UNIDENTIFIED: The Superfunds can come into power some place, even if they have to wet the truck yards down. If it's that important, the asbestos here is that great, you'd certainly be able to, even if you have to supply the water to the truck yards.

CHAIRMAN CLIFFORD: I agree. If we're able to document that the problem associated with the truck yards warrants action, we'll take that action.

UNIDENTIFIED: You've taken samples from the homes; you've taken samples from the yards.

CHAIRMAN CLIFFORD: Right.

UNIDENTIFIED: And now the asbestos is located within the ring levee which was brought in under a certain instance that we had no control over and now the dust that blows off the ring levee, evidently, is the contamination we have with the asbestos.

CHAIRMAN CLIFFORD: That's part of the contamination.

UNIDENTIFIED: Part, but if we hold it down, if it takes water to hold it down, it washes down the drain, it's gone; we don't have to breath it, do we?

CHAIRMAN CLIFFORD: That's right.

UNIDENTIFIED: I think if you've got money to continue, the way you've been going here, there's enough in there to put water over the dust.

CHAIRMAN CLIFFORD: It's not a matter of money.

UNIDENTIFIED: Then, let's do something about the dust. That's the contamination that we have to breathe.

CHAIRMAN CLIFFORD: I agree.

UNIDENTIFIED: If I'm wrong, tell me I'm wrong and I'll sit down and I'll shut up and I won't come back again.

CHAIRMAN CLIFFORD: You're absolutely right, although all the contamination isn't associated with the truck yards and that's what I have to make sure I have the legal basis to take some action and that's what I'm committing to you to get back to you in a week and let you know whether or not we have that basis.

UNIDENTIFIED: One of our last meetings, we had the saying that EPA stopped the City of San Jose from sweeping the streets out here, or that's what I was told by the street sweeping, the head of it, whatever they are. Okay, which is the worst? To have the street sweeper come through once or twice a month or every two months or whatever he does, or every time a truck goes down the road, a bus or a car, the dust falls. You can't even see people across the street. We're talking mostly about State Street.

CHAIRMAN CLIFFORD: The question is, we had the City of San Jose stop street seeping with their sweepers because of the amount of dust it was generating and because of the content of the dust, the asbestos content of dust on the road. The question is, how does that risk the health of the residents of Alviso compared to the risk posed by trucks and cars driving up and down the same street. In terms of comparison, the exposure from whatever dust is generated by cars and trucks is every bit as much a problem as that generated by the street sweepers.

UNIDENTIFIED: And by leaving it sit on the street.

CHAIRMAN CLIFFORD: And as this woman mentioned, by leaving it sit on the street all the time. The answer to that is yes, you're absolutely right, that it's a problem that, in the short-term, we don't have a lot of good ideas of how to deal with it.

UNIDENTIFIED: Why did you have the City stop sweeping the street? I asked the City guy down here at the last meeting.

CHAIRMAN CLIFFORD: Oh, I see the question now. The question -- I didn't understand -- the question was, was it worse to leave the dust on the streets ad allow cars to kick it up and generate a problem or was it worse to have the street sweepers, as they were sweeping it up, generate the problem. I think at the time, we thought that much of the asbestos that was in the road along State Street, Spreckles and Grand was a lot of what was being washed off the ring levee and onto the streets opposed to that as being carried by trucks onto the streets, and that we thought by keeping the street sweepers off until we were able to pave the levee, and cover it permanently, was the best thing we could do. We had thought at the time, we were going to be able to take that action much more quickly than we have, in fact, been able to deal with the problem.

To answer your question, I don't know. I don't know what that difference is now, even that we've taken a year and a half longer than we thought we're going to deal with the ring levee problem.

UNIDENTIFIED: Why can't you just get the street sweepers to come back in now?

CHAIRMAN CLIFFORD: We could; I'm sure. I guess you raise a good point. What we need to do is take a look at the benefit of not having the street sweepers on there against the increased risks of the dust building up on the roads. Nancy, do you have anything to add to that?

MS. WOO: One thing that I can add is that when we're doing our activities specifics, sampling in the next three weeks, you'll see me out there, pulling --

UNIDENTIFIED: Come on out there without a cover on and get that dust and then you will change your mind.

MS. WOO: But, I think we'll have an answer real soon. Like Jerry said, we will get back to you and he did make the commitment that he would get back to you, Mr. --

UNIDENTIFIED: If I may, maybe the watering of the truck yard may be more of a hazard to us than just the dust because the trucks, if the yard is wet, are going to pick up the mud, bring it on the streets for the busses and trucks to re-distribute to the neighbors. You've got kind of a two-fold problem here.

MS. WOO: We know though, the ambient air concentrations for the entire community. So, that, we kno if the trucks, you know, are picking up the dust generating throughout the entire community, the entire community would have a problem.

UNIDENTIFIED: What is EPA's input, please. What is the definition of EPA?

MS. WOO: Environmental Protection Agency.

UNIDENTIFIED: Okay, well, our control is out of hands. There's a lot of dust, a hell of a lot of dust. Whether it has asbestos in it or not, it's out of control. It's not where it should be and if you people can control the environment, let's do it. We're the community that you're talking to and we don't have any control over our environment. If you're here, you should give us some help.

CHAIRMAN CLIFFORD: Jim, to the extent, we can't exercise control over asbestos or any other hazardous substance that's found within the town of Alviso.

UNIDENTIFIED: Anything other than clean air, Jerry, is hazardous to our health, isn't it?

CHAIRMAN CLIFFORD: That's true.

UNIDENTIFIED: Well, it's a hazard.

CHAIRMAN CLIFFORD: But it's not within the constraints that we have, does not allow us to deal with dust, generically. That's a constraint that we have where we're unable to do that.

UNIDENTIFIED: But you're working in a community that's already been contaminated, supposedly, otherwise, you wouldn't be here. So, there, we have a reason, I would think.

CHAIRMAN CLIFFORD: We have a reason and when we finish our broader study, we'll be able to decide whether or not there's an action that's actually warranted with respect to the asbestos.

UNIDENTIFIED: There are more people in this community here that can tell you about the community, what's underground, all around the ground, and how much dirt we eat and how much we sweep and wipe off our furniture on a daily basis, than you'll ever learn in an office conducting all your studies or your bicycle or whatever. We live here. This is part of our community and we're only here because we want to make it better and you're only representing us to make it better. It doesn't seem to me like the time that you've taken you you've done any good. It really doesn't. What have you done for us, since you've been here, really?

CHAIRMAN CLIFFORD: The only thing that I can think of that we've actually done is we've managed to seal the ring levee to reduce the amount of asbestos that's coming off. In the interim, we finalized our study and documented that something actually needs to be done. We have done that. We haven't addressed the truck yards. We did three other things. We paved the extended part of Spreckles Avenue when we found high levels of asbestos, some of which was the result of the ring levee extended down past the paved portion. We paved a lot behind the George Maine School that we had found contained the same types surpentine in asbestos as that composed ring levee. We paved that.

We also found similar material out by the Environmental Education Center and we have been able to cover that effectively. So, we actually have done something. Lately, we haven't done a lot and we explained tonight, obviously not to the satisfaction of our -- or some of the other people here, but there are reasons, not excuses, there are reasons why we haven't been able to do something with the ring levee. Frankly, I don't have a real good reason, nor do I have a real good excuse for why we haven't done something with the truck yards, but I've committed to look into it and get back with you. That's all I can do with the truck yards.

UNIDENTIFIED: What is the purpose of our meeting?

CHAIRMAN CLIFFORD: The purpose of the meeting tonight --

UNIDENTIFIED: Or any night. You said several meetings. What's been the purpose of our meetings.

CHAIRMAN CLIFFORD; Is to keep those of you interested in knowing what we're doing, informed of what we're doing, to solicit input and comment, a lot of what we get tonight, a lot of it from you, as to what your concerns are. Frankly, if you had not raised the truck level, or dust issue or this gentleman not raised the truck level issue again, I probably wouldn't have thought about it. It would not have been the first and foremost on my mind. The ring levee is foremost on my mind. I probably wouldn't have thought of it. So, I appreciate those of you who raised that because I still agree it's something we should deal with.

UNIDENTIFIED: Well, you're concerned with our health; is that true?

CHAIRMAN CLIFFORD: That's true.

UNIDENTIFIED: All right, well, what about this dust that blows all the time? Is that unhealthy?

CHAIRMAN CLIFFORD: Dust is unhealthy. There's not a question there. Unfortunately, the laws that give us the authority to deal with what we're dealing with are not broad enough to allow us to deal with dust in and of itself. The City of San Jose, the County of Santa Clara, they have the authority to pass local ordinances to control dust levels; we don't at EPA. So, in terms of what the community could do to control dust levels or not, the stuff you're talking in your own terms of water or seeding and making sure the grass is growing to keep the dust down, the only other thing I'm aware of that's within your control is to g petition the City of San Jose that would pass an ordinance that would restrict the amount of dust on these truck yards, regardless of the asbestos levels. That's something the City of San Jose has the authority to do and I believe the County of Santa Clara also has the authority. So, there's two governmental bodies that have responsibility. You have a right to appeal and go to them and ask them to do something about it.

UNIDENTIFIED: Excuse me, you lost me. Did I hear correctly that the EPA gave the City of San Jose instructions to stop street sweeping?

CHAIRMAN CLIFFORD: Yes, that's correct.

UNIDENTIFIED: Well, it seems to me, if you've got the authority to do that, it's obvious you must have other authority.

CHAIRMAN CLIFFORD: That's correct. We didn't use our authority. We used the information that we had collected to date and we went to the City of San Jose and asked them if they would stop doing it. We didn't force them to stop doing it. We asked them to stop doing it.

UNIDENTIFIED: But they probably did it because they didn't want to spend money in the community. They had nothing to do with the health.

CHAIRMAN CLIFFORD: Maybe they didn't. The net result is, they stopped at our request because we thought this was the best thing for the people of the city, the town of Alviso.

UNIDENTIFIED: Awfully confusing.

UNIDENTIFIED: I know I'm beating a dead horse, but bear with me. I gather there's asbestos in the dust in the streets and that's the concern for suggesting that they stop being swept. Was that the initial concern about this street sweeping?

CHAIRMAN CLIFFORD: That was our concern, yes.

UNIDENTIFIED: Have the results indicated that it is a concern that there's enough asbestos contaminated in the street dust to try to deep it down?

CHAIRMAN CLIFFORD: We found, to tell you the truth, what we found was low levels of asbestos in the street dust. People had complained about dust and the street sweepers were something that, where people in this community and past meetings that said if there's asbestos in the dust, why are we allowing the City of San Jose to continue street sweeping. So, we asked them to stop. Now, whether or not there's enough asbestos in the street dust that's getting into the air that warrants some longer term fix, we haven't got enough information to conclude that, yet. That will be included, we'll make that finding, based on the longer term study. Nancy mentioned we would have results at the end of September. So, we should know, by that time, whether or not the asbestos levels in the street dust, in combination with the other areas around the town that have asbestos in pockets that have a mechanism to get that asbestos in the air, whether contamination, in total warrants taking any further action, other than what we're proposing on the ring levee. Right now, I don't have that answer.

UNIDENTIFIED: Yet, we got to go another six months with breathing this dust down the streets, huh?

CHAIRMAN CLIFFORD: Yes.

UNIDENTIFIED: You're not being fair to us, really.

UNIDENTIFIED: Isn't there a way to wet sweep it? In the last couple years, there's been absolutely no street cleaning by any public works department at all. I gather it's been done on some honest concerns of not trying to stir up additional problems, street sweeping and stuff. If we, after all the partners can't come to a conclusion that there's enough hazardous material there to be a concern, there must not be all that much there, or is that a far fetched conclusion?

CHAIRMAN CLIFFORD: No, but the issue is not -- what's complicated about asbestos is that isn't very difficult to draw the connection between what's in the soil, what can get into the air, versus what actually stays in the air long enough for people to breathe and then quantifying that so that we can actually determine how much of a health problem that is. Believe me, as frustrated as everyone is here with the progress we're making on this, we're equally as frustrated. This is not the only asbestos site we have. We have three that we're working on through California. This is the only one in a residential, the one that's -- I guess it's not the only --

UNIDENTIFIED: We're concerned here, Jerry. Come on, keep it here.

CHAIRMAN CLIFFORD: Our problems are the same problems in all these different sites. It's extremely difficult, without getting into technical aspects of why it's difficult, it's awkward for me to try to explain how difficult it is. I could try to do that, if there are people here, and it's probably not the best use of everyone's time to do that. There are those of us who would be willing to stick around and go into that detail, if people are interested.

UNIDENTIFIED: What is he liability if we were to ask San Jose to start sweeping the street, Jerry? That's the bottom line.

CHAIRMAN CLIFFORD: The incremental liability, I couldn't give you. I don't know, and frankly, we will be in a position of probably recommending what to do in the long term. Over the short term, which is the next six months to, even a year, the incremental exposure that residents of Alviso are getting to the levels that we found in the street dust over your all's life is probably not going to be a very significant risk. What we'll find out when we pull all our information together and have it in a document by the end of September, we'll take that information that we do know about that incremental list, we'll calculate what that risk would be over a person's lifetime, having been born here and for seventy years, and if that result is a significant health risk, we'll be recommending that something be done. If that result is not a significant health risk, our recommendation will be nothing further be done, most likely.

UNIDENTIFIED: Does that include the ring levee, too?

CHAIRMAN CLIFFORD: No. We've already paid the City and if something needs to be done with ring levee, and that's actually the prime reason we're here was to try to get anybody's comments on what we're proposing to do with the ring levee in the interim until we figure out what we should be doing in the long term area, with the asbestos, the other asbestos areas in Alviso.

UNIENTIFIED: Don't misinterpret some of our comments tonight. I think we appreciate your effort. I think a lot of the people are feeling frustrated because of the lack of accountability by the City of San Jose because you look at -- we don't see San Jose officials here; we don't see the Council people here. I think a lot of them feel very strongly about that. There's a couple of comments I hope you'll really look at. Doctor Harvey touched on them briefly. If you're going to do something with the levee, cap it and so forth, I think I'd encourage to beautify our community. Don't put concrete in here. I think that's disgraceful to come into an already environmental sensitive area and want to put concrete in here. Let's try and beautify this community. One of the things, too, I still have concerns over polymer, and I've brought this up before. One division of EPA still is doing a research on the environmental impacts of polymers or a ceiling, yet we're getting polymers here. I don't know if they'll harm the environment or they wont.

CHAIRMAN CLIFFORD: They won't. The polymers that we put on the ring levee, there is enough test and research data that says it's non-toxic. The last thing we wanted to do was try to fix the asbestos problem and only create another problem in this area. So, we made sure we selected a polymer that was non-toxic and that's what we selected. I guess I do appreciate the comment about the frustration that people are expressing here and I'm not so sure there's much more I can say about that.

I'd like to get back to the ring levee, if we could, for a moment and just ask if there are any other questions or comments, other than the fact that what I'm hearing, in general, is that people still prefer, as had been mentioned in the previous public meeting, soil cover, as opposed to gunite.

UNIDENTIFIED: And possible removal.

CHAIRMAN CLIFFORD: And possible removal.

UNIDENTIFIED: Or both, the gunite and earth on top of the gunite. Wasn't that part of it, gunite with the earth on top of the gunite, as well?

CHAIRMAN CLIFFORD: No, that wasn't something we were proposing to do. Previously, we had looked at a fabric line over the existing ring levee with soil on top of that. We determined that based on that past study that we did, that a larger soil cover was a better solution to the problem than putting a cap on with a little soil cover.

UNIDENTIFIED: They don't have polyurithane, they don't have a longevity of a hundred years or better?

CHAIRMAN CLIFFORD: The question is, is there some synthetic fabric we could put on that would last a long time. The answer is yes, there is synthetic fabrics that would last a long time. I believe the reason that we discounted that was that it was going to be very difficult to make sure that the soil adheres to the fabric cover. So, I think the implementability was that you put the fabric cover on and put soil on top of it and that you'd have to put such a large amount of soil on it to make sure that it didn't slip off the fabric cover --

UNIDENTIFIED: The water district uses fabric or soil stability and erosion control where they got extreme hydraulic problems. I would say here, you've only really got a vertical movement basically of water, compared to a stream flow. So, there are fabrics out there --

CHAIRMAN CLIFFORD: You're exactly right and the reason is that we're trying, in designing a cover, one of the things that the community wanted to make sure we considered was public access to the levee. You're right, if we simply wanted to put something on it to cover it and could be assured that the community wasn't going to use it for anything in terms of hiking, walking their pets, having the children play on it, what have you, we could have done just that. But, one reason, many of the earlier concerns was that children wre going to play on it, they wanted to use the levee, they wanted to walk on it, and walking on it and using it, we felt that the best remedy to account for that would be a much larger soil cover. So, that's why we discounted that in the earlier study.

Juliana, our interpreter, really needs a break and so, we could do one of two things. For those of you that still have a lot of questions you'd like to ask, in this type of forum, we could break for ten minutes and reconvene. If there are people who want to, if people are tired, they want to go home, they could just go home and we could have an informal discussion for those people who want to hang around and ask questions. We'll be willing to stay as long as necessary to respond to the questions. What would you all like to do? If we broke for the evening, is that okay? Okay, thank you very much for coming. A lot of us will be hanging around to answer any questions those of you may have and if there's anybody left who has ear phones that would also like to stay around, our interpreter will be staying around and there are other people here that could interpret the answers to questions you may have. Thank you very much for your input. Good night.

(Hearing adjourned)

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